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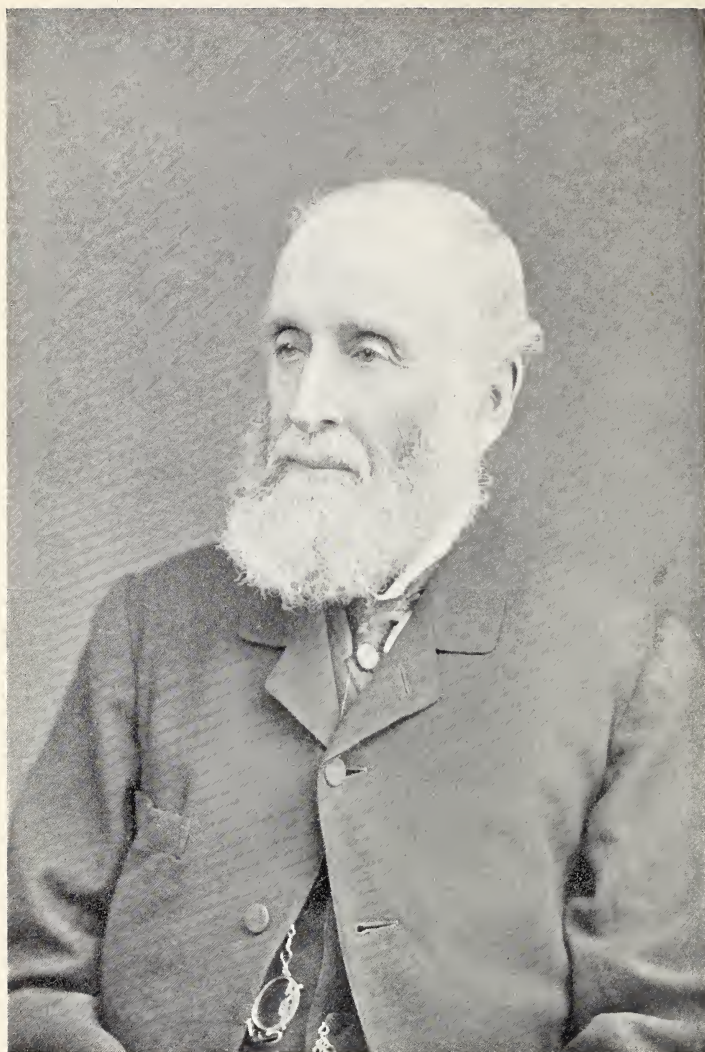
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LORD EUSTACE CECIL

PROCEEDINGS
of the
DORSET NATURAL HISTORY
and
ANTIQUARIAN FIELD CLUB

From MAY, 1920, to MAY, 1921.

Edited by
J. M. J. FLETCHER.

VOLUME XLII.

DORCHESTER:
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The Dorset Natural History and Antiquarian Field Club.

INAUGURATED MARCH 26TH, 1875.

Presidents :

- 1875-1902—J. C. Mansel-Pleydell, Esq., B.A., F.G.S., F.L.S.
 1902-1904—The Lord Eustace Cecil, F.R.G.S.
 1904 * Nelson M. Richardson, Esq., B.A.

Vice-Presidents :

- 1875-1882—The Rev. H. H. Wood, M.A., F.G.S.
 1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.
 1880-1900—The Rev. Canon Sir Talbot Baker, Bart., M.A.
 1880-1900—General Pitt-Rivers, F.R.S.
 1880-1917—The Rev. O. Pickard-Cambridge, M.A., F.R.S., F.Z.S.
 1885 * The Earl of Moray, M.A., F.S.A. Scot., F.G.S.
 1892-1904—Nelson M. Richardson, Esq., B.A.
 1900-1902 { The Lord Eustace Cecil, F.R.G.S.
 1904-1921 {
 1900-1909—W. H. Hudleston, Esq., M.A., F.R.S., F.G.S., F.L.S., *Past Pres.*

Geol. Society :

- 1900-1904—Vaughan Cornish, Esq., D.Sc., F.C.S., F.R.G.S.
 1900 * Captain G. R. Elwes.
 1902-1916—H. Colley March, Esq., M.D., F.S.A.
 1904 * The Rev. Herbert Pentin, M.A.
 1904-1916—The Rev. W. Miles Barnes, B.A.
 1904 * The Rev. Canon J. C. M. Mansel-Pleydell, M.A.
 1904-1908—R. Bosworth Smith, Esq., M.A.
 1908-1909—Henry Storks Eaton, Esq., M.A., *Past Pres. Roy. Met. Society.*
 1909 * The Rev. Canon C. H. Mayo, M.A., D.Litt., F.R. Hist. S., *Dorset Editor of "Somerset and Dorset Notes and Queries."*
 1909 * E. R. Sykes, Esq., B.A., F.Z.S., *Past Pres. Malacological Society.*
 1911-1912—The Rev. C. W. H. Dicker, R.D.
 1912 * Alfred Pope, Esq., F.S.A.
 1913 * Henry Symonds, Esq., F.S.A.
 1913 * His Honour J. S. Udal, F.S.A.
 1915 * Captain John E. Acland, M.A., F.S.A.
 1916 * Sir Daniel Morris, K.C.M.G., D.Sc., D.C.L., F.L.S.
 1918 * The Rev. Canon J. M. J. Fletcher, M.A.
 1918 * W. de C. Prideaux, Esq., F.S.A., F.R.S.M.

Hon. Secretaries :

- 1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.
 1885-1892—The Earl of Moray, M.A., F.S.A. Scot., F.G.S.
 1892-1902—Nelson M. Richardson, Esq., B.A.
 1902-1904—H. Colley March, Esq., M.D., F.S.A.
 1904 * The Rev. Herbert Pentin, M.A.

Hon. Treasurers :

- 1875-1882—The Rev. H. H. Wood, M.A., F.G.S.
 1882-1900—The Rev. O. Pickard-Cambridge, M.A., F.R.S., F.Z.S.
 1901-1910—Captain G. R. Elwes.
 1910-1915—The Rev. Canon J. C. M. Mansel-Pleydell, M.A.
 1915 * Captain John E. Acland, M.A., F.S.A.

Hon. Editors :

- 1875-1884—Professor James Buckman, F.S.A., F.G.S., F.L.S.
 1885-1892—The Earl of Moray, M.A., F.S.A. Scot., F.G.S.
 1892-1901—Nelson M. Richardson, Esq., B.A.
 1901-1906—The Rev. W. Miles Barnes, B.A.
 1906-1909—The Rev. Herbert Pentin, M.A.
 1909-1912—The Rev. C. W. H. Dicker, R.D.
 1912-1917—Henry Symonds, Esq., F.S.A.
 1917 * The Rev. Canon J. M. J. Fletcher, M.A.

* The asterisk indicates the present officials of the Club.

Rules

of the

Dorset Natural History and Antiquarian Field Club.

OBJECT AND CONSTITUTION.

1.—The Club shall be called The Dorset Natural History and Antiquarian Field Club, and shall have for a short title The Dorset Field Club.

The object of the Club is to promote and encourage an interest in the study of the Physical Sciences and Archæology generally, especially the Natural History of the County of Dorset and its Antiquities, Prehistoric records, and Ethnology. It shall use its influence to prevent, as far as possible, the extirpation of rare plants and animals, and to promote the preservation of the Antiquities of the County.

2.—The Club shall consist of (i.) three Officers, President, Honorary Secretary, and Honorary Treasurer, who shall be elected annually, and shall form the Executive body for its management ; (ii.) Vice-Presidents, of whom the Honorary Secretary and Treasurer shall be two, *ex officio* ; (iii.) The Honorary Editor of the Annual Volume of Proceedings ; (iv.) Ordinary Members ; (v.) Honorary Members. The President, Vice-Presidents, and Editor shall form a Council to decide questions referred to them by the Executive and to elect Honorary Members. The Editor shall be nominated by one of the incoming Executive and elected at the Annual Meeting.

There may also be one or more Honorary Assistant Secretaries, who shall be nominated by the Honorary Secretary, seconded by the President or Treasurer, and elected by the Members at the Annual Meeting.

Members may be appointed by the remaining Officers to fill interim vacancies in the Executive Body until the following Annual Meeting.

The number of the Club shall be limited to 400, power being reserved to the Council to select from the list of candidates persons, whose membership they may consider to be advantageous to the interests of the Club, to be additional Members,

PRESIDENT AND VICE-PRESIDENTS.

3.—The President shall take the chair at all Meetings, and have an original and a casting vote on all questions before the Meeting. In addition to the two *ex officio* Vice-Presidents, at least three others shall be nominated by the President, or, in his absence, by the Chairman, and elected at the Annual Meeting.

HON. SECRETARY.

4.—The Secretary shall perform all the usual secretarial work ; cause a programme of each Meeting to be sent to every Member seven days at least before such Meeting ; make all preparations for carrying out Meetings and, with or without the help of a paid Assistant Secretary or others, conduct all Field Meetings. On any questions arising between the Secretary (or Acting Secretary) and a Member at a Field Meeting, the decision of the Secretary shall be final.

The Secretary shall receive from each Member his or her share of the day's expenses, and thereout defray all incidental costs and charges of the Meeting, rendering an account of the same before the Annual Meeting to the Treasurer ; any surplus of such collection shall form part of the General Fund, and any deficit be defrayed out of that Fund.

HON. TREASURER.

5.—The Treasurer shall keep an account of Subscriptions and all other moneys of the Club received and of all Disbursements, rendering at the Annual General Meeting a balance sheet of the same, as well as a general statement of the Club's finances. He shall send copies of the Annual Volume of Proceedings for each year to Ordinary Members who have paid their subscriptions for that year (as nearly as may be possible, in the order of such payment), to Honorary Members, and to such Societies and individuals as the Club may, from time to time, appoint to receive them. He shall also furnish a list at each Annual Meeting, containing the names of all Members in arrears, with the amount of their indebtedness to the Club. He shall also give notice of their election to all New Members.

ORDINARY MEMBERS.

6.—Ordinary Members are entitled to be present and take part in the Club's proceedings at all Meetings, and to receive the published "Proceedings" of the Club, when issued, for the year for which their subscription has been paid.

7.—Every candidate for admission shall be nominated in writing by one Member and seconded by another, to both of whom he must be personally known. He may be proposed at any Meeting, and his name shall appear in the programme of the first following Meeting at which a Ballot is held when he shall be elected by Ballot, one black ball in six to exclude.

Twelve Members shall form a quorum for the purpose of election. A Ballot shall be held at the Annual and Winter Meetings, and may be held at any other Meeting, should the Executive so decide, notice being given in the programme. In the event of the number of vacancies being less than the number of candidates at four successive Meetings, the names of any candidates proposed at the first of such Meetings who have not been elected at one of them shall be withdrawn, and shall not be eligible to be again proposed for election for at least a year after such withdrawal. Provided that if at any Meeting there shall be no vacancies available, it shall not be counted in estimating the above named four Meetings.

8.—The Annual Subscription shall be 10s., which shall become due and payable in advance on the 1st of January in each year. Subscriptions paid on election after September in each year shall be considered as subscriptions for the following year, unless otherwise agreed upon by such Member and the Treasurer. Every Member shall pay immediately after his election the sum of ten shillings as Entrance Fee, in addition to his first Annual Subscription.

9.—No person elected a Member shall be entitled to exercise any privilege as such until he has paid his Entrance Fee and first Subscription, and no Member shall be entitled to receive a copy of the "Proceedings" for any year until his Subscription for that year has been paid.

10.—A registered letter shall be sent by the Hon. Treasurer to any Member whose Subscription is in arrear at the date of any Annual Meeting, demanding payment within 28 days, failing which he shall cease to be a Member of the Club, but shall, nevertheless, be liable for the arrears then due.

11.—Members desiring to leave the Club shall give notice of the same in writing to the Treasurer (or Secretary), but, unless such notice is given before the end of January in any year, they shall be liable to pay the Annual Subscription due to the Club on and after January 1st in that year.

HONORARY MEMBERS.

12.—Honorary Members shall consist of persons eminent for scientific or natural history attainments, and shall be elected by the Council. They pay no subscription, and have all the privileges of Ordinary Members, except voting.

MEETINGS.

13.—The Annual General Meeting shall be held as near the first week in May as may be convenient ; to receive the outgoing President's Address (if any) and the Treasurer's financial report ; to elect the Officers and Editor for the ensuing year ; to determine the number (which shall usually be three or four), dates, and places of Field Meetings during the ensuing summer, and for general purposes.

14.—Two Winter Meetings shall usually be held in or about the months of December or February for the exhibition of Objects of Interest (to which not more than one hour of the time before the reading of the Papers shall be devoted), for the reading and discussion of Papers, and for general purposes.

The Dates and Places of the Winter and Annual Meetings shall be decided by the Executive.

15.—A Member may bring Friends to the Meetings subject to the following restrictions :—No person (except the husband, wife or child of a Member), may attend the Meeting unaccompanied by the Member introducing him, unless such Member be prevented attending from illness, and no Member may take with him to a *Field Meeting* more than one Friend, whose name and address must be submitted to the Hon. Secretary and approved by him or the Executive.

The above restrictions do not apply to the Executive or to the Acting Secretary at the Meeting.

16.—Members must give due notice (with prepayment of expenses) to the Hon. Secretary of their intention to be present, with or without a Friend, at any Field Meeting, in return for which the Secretary shall send to the Member a card for admission to the Meeting, to be produced when required. Any Member who, having given such notice, fails to attend, will be liable only for any expenses actually incurred on his account, and any balance will be returned to him on application. The sum of 1s., or such other amount as the Hon. Secretary may consider necessary, shall be charged to each person attending a Field Meeting, for Incidental Expenses.

17.—The Executive may at any time call a Special General Meeting of the Members upon their initiative or upon a written requisition (signed by Eight Members) being sent to the Honorary Secretary. Any proposition to be submitted shall be stated in the Notice, which shall be sent to each Member of the Club not later than seven days before the Meeting.

PAPERS.

18.—Notice shall be given to the Secretary, a convenient time before each Meeting, of any motion to be made or any Paper or communication desired to be read, with its title and a short sketch of its scope or contents. The insertion of these in the Programme is subject to the consent of the Executive.

19.—The Publications of the Club shall be in the hands of the Executive, who shall appoint annually Three or more Ordinary Members to form with them and the Editor a Publication Committee for the purpose of deciding upon the contents of the Annual Volume. These contents shall consist of original papers and communications written for the Club, and either read, or accepted as read, at a General Meeting; also of the

Secretary's Reports of Meetings, the Treasurer's Financial Statement and Balance Sheet, a list to date of all Members of the Club, and of those elected in the current or previous year, with the names of their proposers and seconders. The Annual Volume shall be edited by the Editor subject to the direction of the Publication Committee.

20.—Twenty-five copies of his paper shall be presented to each author whose communication shall appear in the volume as a separate article, on notice being given by him to the Publisher to that effect.

THE AFFILIATION OF SOCIETIES AND LIBRARIES TO THE CLUB.

21.—Any Natural History or Antiquarian Society in the County may be affiliated to the Dorset Field Club on payment of an annual fee of Ten Shillings, in return for which the annual volume of the Proceedings of the Field Club shall be sent to such Society.

Every affiliated Society shall send the programme of its Meetings to the Hon. Secretary of the Field Club, and shall also report any discoveries of exceptional interest. And the Field Club shall send its programme to the Hon. Secretary of each affiliated Society.

The Members of the Field Club shall not be eligible, *ipso facto*, to attend any Meetings of affiliated Societies. and the Members of any affiliated Society shall not be eligible, *ipso facto*, to attend any Meetings of the Field Club. But any Member of an affiliated Society shall be eligible to read a paper or make an exhibit at the Winter Meetings of the Field Club at Dorchester.

Any Public Library or Club, or School or College Library, in England or elsewhere, may be affiliated to the Dorset Field Club on payment of an annual fee of Ten Shillings, in return for which the annual volume of the Proceedings of the Field Club shall be sent to such Library.

SECTIONAL COMMITTEES.

22.—Small Committees may be appointed at the Annual General Meeting to report to the Club any interesting facts or discoveries relating to the various sections which they represent ; and the Committee of each section may elect one of their Members as a Corresponding Secretary.

NEW RULES.

23.—No alteration in or addition to these Rules shall be made except with the consent of a majority of three-fourths of the Members present at the Annual General Meeting, full notice of the proposed alteration or addition having been given both in the current Programme and in that of the previous Meeting.

The Dorset

Natural History and Antiquarian Field Club.

INAUGURATED MARCH 26th, 1875.

President :

NELSON M. RICHARDSON Esq., B.A.

Vice-Presidents :

THE REV. HERBERT PENTIN, M.A., (*Hon. Secretary*).
 CAPTAIN JOHN E. ACLAND, M.A., F.S.A. (*Hon. Treasurer*).
 CAPTAIN G. R. ELWES, J.P.
 THE REV. CANON J. M. J. FLETCHER, M.A. (*Hon. Editor*).
 THE REV. CANON J. C. M. MANSEL-PLYDELL, M.A.
 THE REV. CANON MAYO, M.A., D.Litt., F.R. Hist. S. (*Dorset Editor of "Somerset and Dorset Notes and Queries"*).
 THE EARL OF MORAY, M.A., F.S.A. Scot., F.G.S.
 SIR DANIEL MORRIS, K.C.M.G., D.Sc., D.C.L., F.L.S.
 ALFRED POPE, Esq., F.S.A.
 W. de C. PRIDEAUX, Esq., F.S.A., F.R.S.M.
 E. R. SYKES, Esq., B.A., F.Z.S. (*Past Pres. Malacological Society*).
 HENRY SYMONDS, Esq., F.S.A.
 HIS HONOUR J. S. UDAL, F.S.A.

Executive Body :

NELSON M. RICHARDSON, Esq., B.A. (*President*)
 THE REV. HERBERT PENTIN, M.A., (*Hon. Secretary*), St. Peter's Vicarage, Portland
 CAPTAIN JOHN E. ACLAND, M.A., F.S.A. (*Hon. Treasurer*) Dorset County Museum, Dorchester.

Hon. Editor :

THE REV. CANON J. M. J. FLETCHER, M.A., The Close, Salisbury.

Publication Committee :

THE EXECUTIVE, THE HON. EDITOR, and E. R. SYKES, Esq.

Sectional Committees :

Dorset Photographic Survey—

THE MEMBERS of the EXECUTIVE
 BODY *ex officio*
 C. J. CORNISH BROWNE, Esq.
 (Hon. Director)
 The Rev. S. E. V. FILLEUL, M.A.
 Dr. E. K. LE FLEMING

C. H. MATE, Esq.
 A. D. MOULLIN, Esq.
 The Rev. J. RIDLEY
 EDWIN SEWARD, Esq., F.R.I.B.A.

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Captain J. E. ACLAND (Chairman)
 Chas. S. PRIDEAUX, Esq. (Corresponding Secretary)
 THE PRESIDENT
 F. E. ABBOTT, Esq.
 Lieut. J. G. N. CLIFT, R.E.
 Lieut.-Colonel F. G. L. MAINWARING

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 VERE L. OLIVER, Esq., F.S.A.
 ALFRED POPE, Esq., F.S.A.
 W. DE C. PRIDEAUX, Esq., F.S.A.
 The Rev. W. RHYDDERCH
 Miss E. E. WOODHOUSE

Numismatic—

H. SYMONDS, Esq., F.S.A. (Corresponding Secretary)
 Captain John E. ACLAND, F.S.A.
 Captain G. R. ELWES
 Lieut.-Colonel F. G. L. MAINWARING

The Rev. Canon J. C. M. MANSEL-PLYDELL, M.A.
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The Rev. A. C. ALMACK, M.A.
 (Corresponding Secretary)
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 R. BARROW, Esq.
 H. W. CRICKMAY, Esq.
 The Rev. James CROSS, M.A.
 The Rev. Canon FLETCHER, M.A.
 G. W. FLOYER, Esq., B.A.

The Rev. H. HAWKINS
 R. HINE, Esq.
 The Rev. Canon MAYO, M.A.
 The Rev. G. C. NIVEN, B.D., F.R.G.S.
 W. B. WILDMAN, Esq., M.A.
 The Rev. A. C. WOODHOUSE, M.A.
 The Rev. H. M. WELLINGTON

List of Members

OF THE

Dorset Natural History and Antiquarian Field Club

FOR THE YEAR 1921.

Honorary Members :

Year of

Election. (The initials "O.M." signify "Original Member.")

- O.M. W. CARRUTHERS, Esq., Ph.D., F.R.S., F.G.S., F.L.S., British Museum
(Nat. Hist.), South Kensington, London.
- 1889 A. M. WALLIS, Esq., 29, Mallams, Portland.
- 1900 A. SMITH WOODWARD, Esq., LL.D., F.R.S., F.G.S., British Museum
(Nat. Hist.), South Kensington, London.
- 1904 SIR WM. THISELTON, DYER, K.C.M.G., C.I.E., LL.D., Sc.D., Ph.D.,
F.R.S., The Ferns, Whitcombe, Gloucester.
- 1904 Sir FREDERICK TREVES, Bart., G.C.V.O., C.B., LL.D., 16, Riding
House Street, Portland Place, London, W.1.
- 1908 THOMAS HARDY, Esq., O.M., D. Litt., LL.D., Max Gate, Dorchester.

Members :

- | | | |
|------|--|------------------------------|
| 1903 | The Most Hon. the Marquis of
Salisbury, M.A., C.B. | The Manor House, Cranborne |
| 1903 | The Most Hon. the Marchioness
of Salisbury | The Manor House, Cranborne |
| O.M. | The Right Hon. the Earl of
Moray, M.A., F.S.A. Scot.,
F.G.S. (<i>Vice-President</i>) | Kinfauns Castle, Perth, N.B. |
| 1919 | The Right Hon. the Earl of
Eldon | Encombe, Corfe Castle |

- 1911 The Right Hon. the Earl of Ilchester Melbury, Dorchester
- 1902 The Right Hon. the Earl of Shaftesbury, K.P., K.C.V.O. St. Giles, Wimborne
- 1892 The Right Rev. the Lord Bishop of Coventry, D.D., F.S.A. Bishop's House, Coventry
- 1907 The Right Hon. Lord Wynford Wynford House, Maiden Newton, Dorchester
- 1907 The Right Hon. Lady Wynford Wynford House, Maiden Newton, Dorchester
- 1910 Abbott, F. E., Esq. Shortwood, Christchurch, Hants
- 1893 Acland, Captain John E., M.A., F.S.A. (*Vice-President and Hon. Treasurer*) Wollaston House, Dorchester
- 1892 Acton, Rev. Edward, M.A. Wolverton Rectory, Basingstoke
- 1921 Aldous, Rev. F. W. The Rectory, Shaftesbury
- 1907 Allner, Mrs. George National Provincial Bank, Sturminster Newton
- 1921 Allner James, Esq. 91, High Steet, Poole
- 1908 Almack, Rev. A. C., M.A. The Rectory, Blandford St. Mary
- 1920 Aston, Captain Harold Preston House, Iwerne Minster, Blandford
- 1920 Aston, Mrs. Harold Preston House, Iwerne Minster
- 1907 Atkinson, George T., Esq., M.A. Durlston Court, Swanage
- 1920 Atkinson, E. H. Tindal, Esq. 4, Essex Court, Temple, E.C.
- 1921 Atkinson, Mrs. Buckland, Rodwell, Weymouth
- 1912 Baker, Rev. E. W., B.A. The Rectory, Witchampton
- 1919 Ball, Rev. H., B.A. Tremel, Ferndown, Wimborne
- 1919 Ball, Miss Evelyn Tremel, Ferndown, Wimborne
- 1906 Bankes, Mrs. Kingston Lacy, Wimborne
- 1912 Bankes, Jerome N., Esq., F.S.A. 63, Redclife Gardens, London, S.W.
- 1902 Barkworth, Edmund, Esq. Hillynead, Seaton
- 1904 Barlow, Major C. M. Southcot, Charminster
- 1921 Barnes, Mrs. Victoria, Mount Pleasant, Weymouth
- 1906 Barrow, Richard, Esq. 5, Claremont Terrace, Exmouth
- 1919 Barrow, Colonel, R.A.M.C. 3, Westerhall, Weymouth
- 1895 Bartelot, Rev. R. Grosvenor, M.A. Fordington St. George Vicarage, Dorchester
- 1904 Baskett, Mrs. S. Russell Totnell House, Leigh, Sherborne
- 1913 Bassett, Rev. H. H. Tilney, R.D. (*Hon. Editor of the Dorset Rainfall Reports*) Whitchurch Vicarage, Blandford

- | | | |
|------|---|--|
| 1917 | Beament, W. O., Esq., M.A. | Beaminster |
| 1888 | Beckford, F. J., Esq. | Witley, Parkstone |
| 1908 | Benett-Stanford, Major J.,
F.R.G.S., F.Z.S. | Hatch House, Tisbury, Wilts |
| 1921 | Bere, H. De la, Esq., C.B. | Melbury Bubb, Dorchester |
| 1920 | Billington, E. R., Esq. | Wyke End, Bincleaves, Weymouth |
| 1920 | Billington, Miss F. A. | Wyke End, Bincleaves, Weymouth |
| 1910 | Blackett, Rev. J. C., B.A. | Compton Rectory, Winchester |
| 1917 | Blathwayt, Rev. F. L., M.A.,
M.B.O.U. (<i>Hon. Editor of the
Dorset Phenological Report</i>) | Melbury Osmond Rectory, Dor-
chester |
| 1919 | Blomefield, Mrs. | Meadowside, Sherborne |
| 1903 | Bond, Gerald Denis, Esq | Holme, Wareham |
| 1903 | Bond, Wm. Ralph G., Esq. | Tyneham, Wareham |
| 1913 | Bone, Clement G. Esq., M.A. | 6, Lennox Street, Weymouth |
| 1889 | Bower, H. Syndercombe, Esq. | Fontmell Parva, Shillingstone,
Blandford |
| 1900 | Bower, Rev. Charles H.S., M.A. | Childe Okeford Rectory, Shilling-
stone, Dorset |
| 1921 | Bradley, Lieut.-Col. Sylvester,
R.A.M.C. | 12, Greenhill Terrace, Weymouth |
| 1898 | Brandreth, Rev. F. W., M.A. | Buckland Newton, Dorchester |
| 1921 | Brown Basil, Rev. H. | Affpuddle Vicarage, Dorchester |
| 1907 | Bulfin, Ignatius, Esq., B.A. | The Den, Knole Road, Bourne-
mouth |
| 1900 | Bullen, Colonel John Bullen
Symes | Catherston Leweston, near Char-
mouth |
| 1921 | Burgess, G. B., Esq. | Withleigh, Spa-road, Radipole,
Weymouth |
| 1907 | Bury, Mrs. Henry | Mayfield House, Farnham, Surrey |
| 1905 | Busk, W. G., Esq. | Wraxall Manor, Cattistock, Dor-
chester |
| 1905 | Busk, Mrs. W. G. | Wraxall Manor, Cattistock, Dor-
chester |
| 1903 | Butler-Bowden, Mrs. Bruno | Upwey House, Upwey |
| 1911 | Butlin, M. C., Esq., M.A. | 7, Westerhall Road, Weymouth |
| 1921 | Cameron, Miss Violet | Sherborne House, Sherborne |
| 1919 | Carroll, Mrs. | The Warren, Glendinning Avenue,
Weymouth |
| 1920 | Carroll, Lt.-Col. E. R. W. | Glendinning Avenue, Weymouth |
| 1891 | Carter, William, Esq. | The Oaks, Parkstone |
| 1919 | Castleman Smith, Miss E. | The Close, Blandford |
| 1913 | Champ, Miss Edith | St. Katherine's, Bridport |
| 1897 | Chudleigh, Mrs. | The Castle, Dudsbury, Longham,
Dorset |

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|------|---|---|
| 1918 | Chudleigh, Captain C. A. E. | West India Regiment, Kingston, Jamaica |
| 1894 | Church, Colonel Arthur | St. Alban's, Rodwell, Weymouth |
| 1905 | Clark, Mrs. E. S. | St. Aldhelm's, Wareham |
| 1895 | Clarke, R. Stanley, Esq. | The Ship Hotel, Crediton, Devon |
| 1920 | Cochrane, G., Esq. | Athelhampton Hall, Dorchester |
| 1883 | Colfox, Miss A. L. | Westmead, Bridport |
| 1878 | Colfox, Colonel T. A., T.D. | Coneygar, Bridport |
| 1904 | Collins, Wm. W., Esq., R.I. | Stoborough Croft, Wareham |
| 1920 | Collins, W. F., Esq. | Vellore, Overcliff Drive West, Bournemouth |
| 1921 | Colson, Mrs. | Hope Bank, Grosvenor Road, Weymouth |
| 1912 | Cooke, Rev. J. H., M.A., LL.D. | Shillingstone Rectory |
| 1903 | Cornish-Browne, C. J., Esq. | Coryton Park, Axminster |
| 1917 | Corrie, E. Rowland, Esq. | Coombe Wood, Branksome Park |
| 1920 | Cosens, Mrs. W. B. | The Gables, Dorchester |
| 1921 | Crawford, Miss | West Hill House, Wyke Regis, Weymouth |
| 1921 | Crichton, Mrs. Hew | Osmington House, Weymouth |
| 1909 | Crickmay, Harry W., Esq. | 49, St. Mary Street, Weymouth |
| 1884 | Cross, Rev. James, M.A. | Baillie House, Sturminster Marshall, Wimborne |
| 1914 | Cross, Miss Florence | Lydlinch, Sturminster Newton |
| 1885 | Curme, Decimus, Esq., M.R.C.S. | 1, Nelson Road, Bournemouth |
| 1896 | Curtis, C. H., Esq. | Blandford |
| 1897 | Curtis, Wilfred Parkinson, Esq., F.E.S. | Drake North, Sandringham Road, Parkstone |
| 1903 | Dacombe, J. M. J., Esq. | 27, Holdenhurst Road, Bournemouth |
| 1918 | Dacombe, Miss | 27, Holdenhurst Road, Bournemouth |
| 1914 | Dalton, Mrs. E. E. | Cerne Abbas, Dorchester |
| 1907 | Daniell, G. H. S., Esq., M.B. | Brentry, Blandford |
| 1894 | Davis, Geo., Esq. | West Lodge, Icen Way, Dorchester |
| 1904 | Deane, Mrs. A. M. | Badbury, 3, Park Road, Bournemouth |
| 1910 | Devenish, Major J. H. C. | Springfield, Weymouth |
| 1907 | Dicker, Miss Eleanor H. | Great Toller, Dorset |
| 1919 | Dicker, C. G. Hamilton, Esq. | Keble College, Oxford |
| 1912 | Dickson, Colonel W. D. | Southill, Dean Park, Bournemouth |
| 1912 | Dickson, Mrs. W. D. | Southill, Dean Park, Bournemouth |
| 1921 | Digby, Major F. J. B. Wingfield, D.S.O. | Sherborne Castle |

- | | | |
|------|--|---|
| 1921 | Digby, Rev. Canon Wingfield,
M.A. | The Vicarage, Sherborne |
| 1911 | Dillon-Trenchard Miss
Margaret | The Ridge, Durlston Park Road,
Swanage |
| 1908 | Dominy, G. H., Esq., M.R.C.S.,
L.R.C.P. | Burbage, Marlborough |
| 1919 | Dominy, H., Esq. | The Homestead, Cerne Abbas |
| 1912 | Dru Drury, G. Esq., M.R.C.S.,
L.R.C.P. | Corfe Castle, Wareham |
| 1921 | Drummond, Mrs. | Trent Manor, Sherborne |
| 1905 | Duke, Mrs. Henry | Manor House, Godmanstone, Dor-
chester |
| 1907 | Duke, Miss M. Constance | The Limes, Dorchester |
| 1908 | Duke, Mrs. E. Barnaby | Maen, Dorchester |
| 1910 | Eaton, Rev. A. E., M.A., F.E.S. | Richmond Villa, Northam, North
Devon |
| 1916 | Edwards, Rev. R. D. St. G.,
M.A. | Longbredy Rectory, Dorchester |
| 1913 | Ellis, Henry, Esq., F.R.A.S. | Boat Close, Lyme Regis |
| 1885 | Elwes, Captain G. R. (<i>Vice-
President</i>) | 3, Jarborough Road, Southsea |
| 1921 | Elwes, Colonel L. C. | Burnt Hill, Broadstone |
| 1921 | Elwes, Mrs. L. C. | Burnt Hill, Broadstone |
| 1913 | Facey, C. S., Esq., M.B. | The Elms, Chickereil, near Wey-
mouth |
| 1886 | Falkner, C. G., Esq., M.A. | Ireton Bank, Rusholme, Manchester |
| 1903 | Farrer, Colonel Philip | Binnegar Hall, Wareham |
| 1912 | Ferguson, Miss Constance | Elwell Lea, Upwey, Dorchester |
| 1904 | Ffooks, Mrs. E. Archdall | Kingscote, Dorchester |
| 1904 | Fielding, Thos., Esq., M.D. | Genesta, West Hill Road, Bourne-
mouth |
| 1892 | Filleul, Rev. S. E. V., M.A. | Sandford House, Wareham |
| 1910 | Filliter, Mrs. W. D. | Arishmel, Parkstone, Dorset |
| 1911 | Fisher, Rev. J. Martyn, M.A.,
R.D. | St. Paul's Vicarage, Weymouth |
| 1907 | Fletcher, Rev. Canon J. M. J.,
M.A., (<i>Hon. Editor and Vice-
President</i>) | The Close, Salisbury |
| 1890 | Fletcher, W. H. B., Esq. | Aldwick Manor, Bognor, Sussex |
| 1885 | Floyer, G. W., Esq., B.A. | West Stafford, Dorchester |
| 1895 | Forbes, Mrs | Culverhayes, Shillingstone, Blandford |
| 1897 | Forde, Henry, Esq. | Luscombe, Parkstone |
| 1910 | Forder, B. C., Esq. | Lyston, Branksome Park, Bourne-
mouth |
| 1921 | Forder, Mrs. B. C. | Lyston, Branksome Park, Bourne-
mouth |
| 1893 | Forrester, Mrs. James | Westport, Wareham |

- 1921 Foster, J. J., Esq., F.S.A. Aldwick, Holland Road, Sutton,
Surrey
- 1910 Freame, Major B. E. The Chantry, Gillingham
- 1921 French, Mrs. Harvey Manor Farm, St. James', Shaftesbury
- 1895 Fry, Edward Alexander, Esq. Sunnyside, Bulstrode Way, Gerrard's
Cross, Bucks.
- 1903 Fry, George, S., Esq., C.B.E. 15, Walsingham Road, Hove
- 1921 Fudge, Mrs. J. Whittle Glen View, Dorchester
- 1896 George, Mrs. Fleet House, near Weymouth
- 1921 Gerard-Pearse, J. Esq., F.R.C.S. 11, Royal Terrace, Weymouth
- 1921 Gerard-Pearse, Mrs. 11, Royal Terrace, Weymouth
- 1921 Girling, Dr. C. J., M.B. Cranborne
- 1890 Glyn, Captain Carr Stuart Woodleaze, Wimborne
- 1920 Gordon, Frank, Esq. 5, Lansdowne, Weymouth
- 1906 Gowring, Mrs. B. W. 49, High West Street, Dorchester
- 1920 Grazebrook, Lieut.-Col. G. C.,
C.M.G., D.S.O. The Verne Citadel, Portland
- 1888 Greves, Hyla, Esq., M.D. Rodney House, Bournemouth
- 1921 Grimley, A. F., Esq. St. Crispin's, Sherborne
- 1920 Grimsdell, H. J., Esq. 16, Brunswick Terrace, Weymouth
- 1904 Groves, Major Herbert J. Clifton, Weymouth
- 1906 Groves, Miss S. J. Thickthorne, Broadwey, Dorset
- 1912 Groves, Miss Blackdown, Weymouth
- 1906 Gundry, Joseph, Esq. Red House, Queen's Avenue, Dor-
chester
- 1912 Haines, F. H., Esq., M.R.C.S.,
L.R.C.P. Brookside, Winfrith, Dorchester
- 1920 Haines, C. E., Esq. Cranham, Glendinning Avenue,
Weymouth
- 1920 Haines, Mrs. Cranham, Glendinning Avenue,
Weymouth
- 1903 Hambro, Sir Everard, K.C.V.O. Milton Abbey, Dorset
- 1913 Hamilton, Miss Affpuddle Vicarage, Dorchester
- 1921 Hastings, Mrs. J. Wincombe Park, Shaftesbury
- 1903 Hawkins, Miss Isabel Ryme, Elwell Street, Upwey
- 1908 Hawkins, Rev. H. 1, Westerhall, Weymouth
- 1920 Haydon, Clement J., Esq. Ben Vuela, West Cliff Road,
Bournemouth
- 1893 Hayne, R. Esq. Spring Bottom, Osmington
- 1911 Hellins, Rev. Canon, M.A.,
LL.B. Marnhull Rectory, Dorset
- 1911 Hellins, Mrs. Marnhull Rectory, Dorset
- 1899 Henning, Mrs. Frome House, Dorchester
- 1916 Hewgill, Chas. W. Esq. Compton Lodge, Weymouth
- 1912 Hichens, Mrs. T. S. Flambers, Trent, Sherborne
- 1910 Hill, Miss Pearson Rax, Bridport

- 1902 Hine, R, Esq.
 1902 Homer, Miss E. C. Wood
 1907 Homer, Mrs. G. Wood
 1921 Hyde, Edward, Esq.
 1903 Jenkins, Rev. T. Leonard, M.A.
 1912 Jordan, Miss
 1915 Kentish, G. C. A., Esq.
 1920 Knight, Alexander, Esq.
 1920 Knight, Mrs.
 1895 Lafontaine, A. C. de Esq., F.S.A.
 1876 Langford, Rev. Canon, M.A.
 1919 Le Breton, Captain J. G.
 1907 Lees, Rear-Admiral Edgar, R.N.
 1907 Lees, Mrs. Edgar
 1910 Le Fleming, E. K., Esq., B.A., M.B.
 1900 Legge, Miss Jane
 1902 Lewis, Rev. A., M.A.
 1890 Lister, Miss Gulielma, F.L.S.
 1921 Lithgow, Major H. L.
 1905 Llewellyn, W., Esq., M.A.
 1892 Lock, His Honour Judge B. Fossett
 1911 Long, Rev. H. R., B.A.
 1888 MacDonald, P. W., Esq., M.D.
 1902 Mainwaring, Lieut.-Col. F. G. L.
 1920 Manning, H. C., Esq., M.R.C.S., L.R.C.P.
 1890 Mansel-Pleydell, Rev. Canon J. C. M., M.A., (*Vice-President*)
 1883 Marriott, Sir W. Smith, Bart.
 1920 Marshall, Major E. T.
 1918 Marston, Miss
 1907 Mate, C. H., Esq.
 1920 Maturin, Rev. M. Persse, M.A.
 o.m. * Mayo, Rev. Canon, M.A., D.Litt., F.R. Hist. S. (*Vice-President*)
 1912 McDowall, A. S., Esq., M.A.
 1905 Morgan, Mrs.
 Beaminster
 Bardolf Manor, Puddletown
 Bardolf Manor, Puddletown
 Lloyds Bank, Wimborne
 Leigh Vicarage, Sherborne
 The Ridge, Durlston Park Road, Swanage
 Longcroft, Windsor Road, Parkstone
 Long Lynch, Childe Okeford, Shillingstone
 Long Lynch, Childe Okeford, Shillingstone
 21 Vale Avenue, Chelsea, S.W. 3.
 Southbrook, Starcross, S. Devon
 Lodgers Court, Bridport
 Springfield, Cann, Shaftesbury
 Springfield, Cann, Shaftesbury
 St. Margaret's Wimborne
 Allington Villa, Bridport
 Highfield, Portishead
 High Cliff, Lyme Regis
 Walton Lodge, Rodwell, Weymouth
 Upton House, Poole
 The Toft, Bridlington, East Yorks
 Tolpuddle, Dorchester
 Grasmere, Spa Road, Weymouth
 Wabey House, Upwey
 1, Royal Crescent, Weymouth
 19, Moore Street, Cadogan Square, London, S.W. 3.
 The Down House, Blandford
 Notley Farm, Owermoigne, Dorchester
 Corfe Castle
 Elim, Surrey Road South, Bourne-mouth
 West Parley Rectory, Wimborne
 Gillingham, Dorset
 Warmwell Mill House, Dorchester
 The Vicarage, Yetminster

- 1911 Morris, Sir Daniel K.C.M.G.,
D.Sc., D.C.L., F.L.S., (*Vice-
President*) 14, Crabton Close, Boscombe
- 1920 Morton, P. H., Esq. High West Street, Dorchester
- 1914 Moule, Rev. A. C., B.A. Trumpington Vicarage, Cam-
bridge
- 1897 Moullin, Arthur D., Esq., Fermain, Rempstone Road, Swanage
- 1919 Murdoch, Mrs. 3, Dunmarklyn Mansions,
Weymouth
- 1921 Nash, Miss 12, Waterloo Place, Weymouth
- 1921 Nash, Miss Helen 12, Waterloo Place, Weymouth
- 1919 Negus, Rev. A. E., M.A. Steepleton Rectory, Dorchester.
- 1905 Nicholson, Captain Hugh Nettlecombe, Melplash
- 1921 Newbery, F. H., Esq. Corfe Castle
- 1920 Niven, Rev. G. C., B.D., F.R.G.S. St. Peter's Rectory, Dorchester
- 1921 Nix, Miss M. M. 11, Alexandra Road, Weymouth
- 1906 Oke, A. W., Esq., B.A., LL.M.
F.S.A., F.G.S. 32, Denmark Villas, Hove, Sussex
- 1886 Okeden, Colonel U. E. Parry Turnworth, Blandford
- 1908 Oliver, Vere L., Esq., F.S.A. Greenhill House, Weymouth
- 1908 Oliver, Mrs. Vere L. Greenhill House, Weymouth
- 1904 Oliver, Weston, Esq., M.A. Castle House, Weymouth
- 1908 Ord, W. T., Esq., M.R.C.S.,
L.R.C.P., F.G.S. 18, Littledown Road, Bournemouth
- 1911 Oules, W. W., Esq., R.A. 12, Bryanston Square, London, W.
- 1911 Oules, Miss Catherine 12, Bryanston Square, London, W.
- 1919 Paine, Mrs. The Warren, Uplyme, Lyme Regis
- 1919 Paine, Miss Ruth The Warren, Uplyme, Lyme Regis
- 1921 Palmer, Colonel H. I. E. The Merse, Grosvenor Road, Wey-
mouth
- 1921 Palmer, Mrs. The Merse, Grosvenor Road, Wey-
mouth
- 1914 Pass, Alfred Douglas, Esq. Wootton Fitzpaine, Charmouth
- 1890 Patey, Miss 185, Oakwood Court, Kensington
London, W.
- 1908 Patterson, Mrs. Myles Conygar, Broadmayne, Dorchester
- 1919 Patterson, Myles, Esq., B.A. Conygar, Broadmayne, Dorchester
- 1907 Paul, Edward Clifford, Esq.,
M.A. Eastbrook House, Upwey
- 1894 Payne, Miss Florence O. Rydal, Wimborne
- 1918 Peachell, G. E., Esq., M.D. Herrison, Dorchester
- 1906 Pearce, Mrs. Thos. A. 27, Icen Way, Dorchester
- 1909 Pearce, Edwin, Esq. Fore Street, Taunton
- 1921 Pearce, E. J. Esq. K 4, New Court, Sidney Sussex
College, Cambridge
- 1894 Penny-Snook, S., Esq., M.R.C.S.,
L.R.C.P. Netherton House, Weymouth

- 1907 Penny-Snook, Mrs. S. Netherton House, Weymouth
- 1901 Pentin, Rev. Herbert, M.A.
(*Vice-President and Hon. Secretary*) St. Peter's Vicarage, Portland
- 1920 Peter, Mrs. Westdown, Weymouth
- 1894 Peto, Sir Henry, Bart. Chedington Court, Misterton, Somerset
- 1908 Phillips, Rev. C. A., M.A., Walton House, Bournemouth
- 1898 Pickard-Cambridge, A.W., Esq., M.A. St. Catherine's, Headington Hill, Oxford
- 1908 Pike, Leonard G., Esq. Kingbarrow, Wareham
- 1920 Pim, W. Malcolm, Esq. Woodstock, Dorchester Road, Weymouth
- 1920 Pim, Mrs. W. Malcolm Woodstock, Dorchester Road, Weymouth
- 1908 Pitt-Rivers, A. L. Fox, Esq., F.S.A. Rushmore, Salisbury
- 1904 Plowman, Rev. L. S., Ibberton Rectory, Blandford
- 1896 Pond, S., Esq., Blandford
- 1894 Ponting, Chas. E., Esq., F.S.A., Lockeridge, Parkstone,
- o.m. Pope, Alfred, Esq., F.S.A. (*Vice-President*) South Court, Dorchester
- 1906 Pope, Major Alfred Rolph, M.A., Culliford House, Dorchester
- 1906 Pope, Mrs. Alfred Rolph Culliford House, Dorchester
- 1914 Powell, H. Bolland, Esq., A.M.I.C.E. Bowland, Westminster Road, Branksome Park, Bournemouth
- 1921 Powys, A. R., Esq. 13, Hammersmith Terrace, London, W.
- 1920 Prideaux, A. E. D., Esq., L.D.S. Wadhain House, Dorchester
- 1896 Prideaux, C. S., Esq., L.D.S., F.R.S.M., F.R.A.I. Ermington, Dorchester
- 1900 Prideaux, W. de C., Esq., L.D.S., F.S.A., F.R.S.M. (*Vice-President*) 12, Frederick Place, Weymouth
- 1905 Pringle, Henry T., Esq., M.D. Ferndown, Dorset
- 1905 Pringle, Mrs. Henry T. Ferndown, Dorset
- 1921 Pugh, Rev. C. S. Buckland Ripers Rectory, Dorchester
- 1888 Pye, William, Esq. Dunmore, Rodwell, Weymouth
- 1921 Quick, R., Esq., F.S.A. Sec., Russell-Cotes Museum, Bournemouth
- 1905 Ramsden, Mrs. Meerhay, Beaminster, Dorset
- 1912 Rawlence, E. A., Esq., F.S.A. S. Andrew's, Churchfields, Salisbury
- 1921 Rawlence, Major A. R. Dyrham, Sherborne
- 1919 Raymond, Lt.-Col., R.G.A. The Croft, Wimborne
- 1919 Raymond, Mrs. The Croft, Wimborne

- 1921 Rees, Surgeon-Captain O.,
R.N. (ret.) Abbotsbury, Dorchester
- 1886 Reynolds, Mrs. Arthur Wyncroft, Bridport
- 1887 Richardson, N. M., Esq. B.A.
(*President*) Montevideo, Chickerell, near
Weymouth
- 1920 Ricardo, Miss K. Berghmote, Wimborne
- 1901 Ridley, Rev. J. Pulham Rectory, Dorchester
- 1911 Robson, Colonel H. D. Oswald, Lulworth Cove
- 1911 Robson, Mrs. H. D. Oswald, Lulworth Cove
- 1886 Rodd, Edward Stanhope, Esq. Chardstock House, Chard
- 1907 Roe, Miss M. M. E. Trent Rectory, Sherborne
- 1909 Roe, Rev. Prebendary Wilfred
T., M.A. Trent Rectory, Sherborne
- 1912 Romilly, Geo., Esq., M.A. The Grange, Marnhull
- 1907 Roper, Freeman, Esq., F.L.S. Forde Abbey, Chard
- 1905 Sanderson-Wells, T. H., Esq.,
O.B.E., M.D., F.R.C.S. 16, Victoria Terrace, Weymouth
- 1905 Saunt, Miss The Cottage, Upwey
- 1905 Saunt, Miss B.V. The Cottage, Upwey
- 1910 Schuster, Mrs. W. P. Broadstone House, Broadstone
- 1883 Searle, Alan, Esq. Hawkmore, Paignton, S. Devon
- 1919 Seward, Edwin, Esq., F.R.I.B.A. 12, Victoria Terrace, Weymouth
- 1906 Shephard, Colonel C.S., D.S.O. Shortlake, Osmington, Weymouth
- 1919 Sheridan, M. O., Esq. Halsdon, Warmwell, Dorchester
- 1920 Sheridan, Mrs. M. O. Halsdon, Warmwell, Dorchester
- 1884 Sherren, J. A., Esq., F.R.Hist.S. Helmsley, Pen Hill Avenue, Parkstone
- 1914 Sherring, R. Vowell, Esq.,
F.L.S. Hallatrow, Bristol
- 1913 Shields, Rev. A. J., M.A. Battleford, Axminster
- 1897 Simpson, Jas., Esq. Brampton Kinlet, Canford Cliff
Bournemouth
- 1920 Smerdon, E. Wilmot, Esq., M.D.,
F.R.C.S. 38, Cornwall Road, Dorchester
- 1916 Smith, Rev. Edward, M.A., R.D. Hazelbury Bryan Rectory, Blandford
- 1919 Smith, Frederick W., Esq.,
F.S.A. The Manor House, Poyntington,
Sherborne
- 1899 Smith, Howard Lyon, Esq.,
L.R.C.P. Mount Pleasant, Inkbarrow,
Worcestershire
- 1909 Smith, Nowell C., Esq., M.A. The School House, Sherborne
- 1908 Smith, Mrs. Spencer The Vine House, Sturminster Newton
- 1888 Solly, Rev. H. Shaen, M.A. 5, Denewood Road, Bournemouth West
- 1919 Sotheran, Miss Gertrude The New House, Norden, Corfe Castle
- 1919 Stephens, Major J. A. Hayden Lodge, Holywell, Dorchester
- 1921 Stephen, Major F. A., D.S.O. Moorfields, Ferndown, Wimborne
- 1918 Stote, Rev. A. W., M.A. Colehill Vicarage, Wimborne

- | | | |
|------|---|---|
| 1920 | Stote, Mrs. A. W. | Colchill Vicarage, Wimborne |
| 1920 | Streatfeild, C., Esq., I.C.S. | Champions, Beaminster |
| 1895 | Sturdy, Leonard, Esq. | Trigon, Wareham |
| 1896 | Sturdy, Philip, Esq. | The Wick Cottage, Branksome, near Bournemouth |
| 1907 | Sturdy, Alan, Esq., | Linden, East Lulworth |
| 1905 | Sturdy, E. T., Esq. | Norburton, Burton Bradstock, Bridport |
| 1914 | Sturrock, J., Esq., C.I.E. | 12, Greenhill, Weymouth |
| 1920 | Sugden, E. Percy, Esq. | Uplands, Wimborn : |
| 1920 | Sugden, Mrs. | Uplands, Wimborne |
| 1898 | Suttill, H. S., Esq. | Pymore, Bridport |
| 1905 | Suttill, Mrs. John. | 24, West Street, Bridport |
| 1903 | Swaffield, A. Owen, Esq. | Rodwell Lodge, Weymouth |
| 1912 | Swinburne Hanham, J. C., Esq. | 106, Goldhurst Terrace, N.W. |
| 1893 | Sykes, E. R., Esq., B.A., F.Z.S.
(<i>Vice-President</i>) | West Lodge, Iwerne Minster, Blandford |
| 1889 | Symes, Colonel G. P., M.A., B.C.L., M.V.O. | Monksdene, Dorchester Road, Weymouth |
| 1904 | Symonds, Arthur G., Esq. | 10, South Street, Dorchester |
| 1904 | Symonds, Henry, Esq., F.S.A.
(<i>Vice-President</i>) | Staplegrove Elm, near Taunton |
| 1912 | Symonds, F. G., Esq. | The Firs, Sturminster Newton |
| 1913 | Symonds, Wm. Pope, Esq. | Newton House, Sturminster Newton |
| 1921 | Tanner, Rev. E. V., M.A., M.C. | The College House, Weymouth |
| 1901 | Telfordsmith, Telford, Esq., M.A., M.D. | The Knoll, Parkstone |
| 1906 | Thomson, Chas. Bertram, Esq., F.R.C.S. | Romansleigh, Wimborne |
| 1920 | Thresher, Miss Maud | Corfe Hill, Weymouth |
| 1898 | Troyte-Bullock, Mrs. | Silton Lodge, Zeals, Bath |
| 1921 | Tyrwhitt-Drake, Mrs. | Crundle Court, Milborne Port |
| o.m. | Udal, His Honour J. S., F.S.A.
(<i>Vice-President</i>) | 24, Neville Court, London, N.W. 8. |
| 1908 | Udal, N. R., Esq., B.A. | Gordon College, Khartoum |
| 1890 | Usherwood, Rev. Canon, M.A. | Bagdale, Parkstone |
| 1919 | Veitch, W. Hardie, Esq. | Lullingstone, Wimborne |
| 1921 | Vidler, Oscar C., Esq. | Widcombe, Dorchester |
| 1910 | Vivian, S. P., Esq. | 22, Royal Avenue, Chelsea, S.W. |
| 1887 | Walker, Rev. S. A., M.A. | Charlton Manor, Blandford |
| 1916 | Ward, The Ven. Algonon, M.A., F.S.A., Scot. | Sturminster Newton Vicarage |
| 1905 | Ward, Samuel, Esq. | Ingleton, Greenhill, Weymouth |
| 1904 | Warry, Mrs. King | 99, Gossom's End, Berkhamsted, Herts. |

1904	Warry, Wm., Esq.	Westrow, Holwell, Sherborne
1917	Waterston, C., Esq.	Bucknowle House, Corfe Castle
1905	Watkins, Wm., Esq., F.R.G.S.	Ethelburga House, 91-93, Bishopsgate, London, E.C., 2.
1921	Wellington, Rev. H. M., M.A.	Athelhampton Rectory, Dorchester
1908	Whitby, Mrs. J.	Preston, Yeovil
1921	White, E. Barton, M.R.C.S., L.R.C.P., F.E.S.	Herrison, Dorchester
1914	Widnell, Edward, Esq., M.A.	Royston, Wimborne
1903	Williams, Captain Berkeley C. W.	Herringston, Dorchester
1884	Williams, Colonel Sir Robert, Bart., M.P.	Bridehead, Dorchester
1908	Williams, Miss Rhoda	Bridehead, Dorchester
1921	Wilkinson, W. T., Esq.	Kildare, Dorchester Road, Weymouth
1906	Winwood, T. H. R., Esq., M.A.,	Syward Lodge, Dorchester
1921	Wingrave, Wyatt, Esq., M.D.	Lyne Regis
1910	Woodd, A. B., Esq., M.A., M.R.I.	Heckfield, Milford-on-Sea, Hants
1903	Woodhouse, Miss Ellen E.	Chilmore, Ansty, Dorchester
1906	Woodhouse, Frank D., Esq.	Old Ford House, Blandford St. Mary
1906	Woodhouse, Mrs. Frank D.	Old Ford House, Blandford St. Mary
1920	Wentworth-Forbes, Mrs.	10, Greenhill, Weymouth
1920	Woodhouse, Major H. S.	Norden, Blandford
1902	Wright, Rev. Herbert L., B.A.	Church Knowle Rectory, Corfe Castle
1921	Yeatman, Captain L. L., B.A.	Stock House, Sturminster Newton

AFFILIATED LIBRARIES (Rule XXI).

1911	Central Public Library	39, Christchurch Road, Bournemouth
1915	Sherborne School Library	Sherborne
1920	New York Public Library	per Messrs. Stevens & Brown, 4, Trafalgar Square, W.C. 2.
	Simpkin, Marshall & Co.	31, Paternoster Row, E.C. 4, "Export No. 1, Dept. L.B."

(Any omissions or errors should be notified to the Hon. Secretary)

New Members.

ELECTED SINCE THE PUBLICATION OF THE LIST CONTAINED
IN VOL. XLI.

ELECTED MAY 10TH, 1921.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Seconder.</i>
Mrs. Drummond, of Trent Manor, Sherborne.	Mrs. Hichens.	Captain Berkeley Williams.
Mrs. Harvey French, of The Manor Farm, St. James', Shaftesbury.	Vere L. Oliver, Esq.	The Rev. Edward Acton.
Miss Nash, of 12, Waterloo Place, Weymouth.	"	Colonel C. S. Shephard.
Miss Helen Nash, of 12, Waterloo Place, Weymouth.	"	"
Miss M. M. Nix, of 11, Alexandra Road, Weymouth.	Dr. C. S. Facey.	W. de C. Prideaux, Esq.
Surgeon-Captain O. Rees, R.N. (ret.), of Abbotsbury, Dorchester.	Dr. W. Hawkins.	Col. F. G. L. Mainwaring.
E. Barton White, Esq., M.R.C.S., L.R.C.P., F.R.S., of Herrison, Dorchester.	Mrs. Gowing	Dr. G. E. Peachell.
The Rev. H. M. Wellington, M.A., of Burleston Rectory, Dorchester.	The Rev. H. R. Long.	Miss Hamilton.

ELECTED JULY 28TH, 1921.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Seconder.</i>
Mrs. Colson, of Hope Bank, Grosvenor Road, Weymouth.	Miss M. H. Saunt.	W. T. Fletcher, Esq.
J. J. Foster, Esq., F.S.A., of Aldwick, Holland Road, Sutton, Surrey.	Captain J. E. Acland.	The Hon. Secretary.
Edward Hyde, Esq., of Lloyds Bank, Wimborne.	Dr. E. Kaye Le Fleming.	Dr. C. B. Thomson.
The Rev. J. B. Johnson, M.D., of Chedington Rectory, Misterton, Somerset.	Sir Henry Peto, Bart.	Captain J. E. Acland.
Colonel H. I. E. Palmer, of The Merse, Grosvenor Road, Weymouth.	S. Ward, Esq.	The President.
Mrs. Palmer, of The Merse, Grosvenor Road, Weymouth.	"	"
E. J. Pearce, Esq., of The Lodge, Corpus Christi College, Cambridge.	Nowell Smith, Esq.	The Rev. W. T. Roe.
Oscar C. Vidler, Esq., of Widcombe, Dorchester.	A. E. D. Prideaux, Esq.	Myles Patterson, Esq.

ELECTED AUGUST 30TH, 1921.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Second.</i>
James Allner, Esq., of 91, High Street, Poole.	The Rev. A. C. Almack.	Mrs. Allner.
H. De la Bere, Esq., C.B., of Melbury Bubb, Dorchester.	Major J. A. Stephens.	The Rev. F. L. Blathwayt.
Mrs. B. C. Forder, of Lyston, Branksome Park, Bournemouth.	Miss B. V. Saunt.	E. R. Sykes, Esq.
Major F. A. Stephens, D.S.O., of Moorfields, Ferndown, Dorset.	Dr. H. T. Pringle.	Mrs. Pringle.

ELECTED SEPTEMBER 22ND, 1921.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Second.</i>
Colonel L. C. Elwes, of Burnt Hill, Broadstone.	E. Percy Sugden, Esq.	Dr. E. Kaye Le Fleming.
Mrs. L. C. Elwes, of Burnt Hill, Broadstone.	"	"
Major H. L. Lithgow, of Walton Lodge, Rodwell, Weymouth.	Dr. C. S. Facey.	Miss Thresher.
A. R. Powys, Esq., of 13, Hammersmith Terrace, London.	The President.	Vere L. Oliver, Esq.
R. Quick, Esq., F.S.A. Scot., of the Russell-Cotes Museum, Bournemouth.	Sir Daniel Morris.	C. H. Mate, Esq.
Major A. R. Rawlence, of Dyrham, Sherborne.	E. A. Rawlence, Esq.	The Rev. Prebendary W. T. Roe.
Mrs. Tyrwhitt-Drake, of Crundale Court, Milborne Port.	Miss Catherine Oules.	The Rev. Canon C. H. Mayo, D.Lit.
W. T. Wilkinson, Esq., of Kildare, Dorchester Road, Weymouth.	Dr. C. S. Facey.	The President.
Major F. J. B. Wingfield Digby, D.S.O., J.P., of Sherborne Castle.	E. A. Rawlence, Esq.	The Hon. Secretary.
The Rev. Canon Wingfield Digby, M.A., of The Vicarage, Sherborne.	"	"
Captain L. L. Yeatman, B.A., of Stock House, Dorset.	The Lord Bishop of Coventry.	"

ELECTED DECEMBER 6TH, 1921.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Second.</i>
The Rev. F. W. Aldous, of The Rectory, Shaftesbury.	The Rev. Canon Fletcher.	The Hon. Secretary.
Mrs. Barnes, of Victoria, Mount Pleasant, Weymouth.	W. Malcolm Pim, Esq.	Miss Nix.
Lt.-Col. Sylvester Bradley, R.A.M.C., of 12, Greenhill Terrace, Weymouth.	Dr. T. H. Sanderson-Wells.	W. de C. Prideaux, Esq.
Miss Violet Cameron, of Sherborne House, Sherborne.	Mrs. Hichens.	The Rev. A. J. Shields.

<i>Nominee.</i>	<i>Proposer.</i>	<i>Seconder.</i>
Mrs. J. Whittle Fudge, of Glen View, Dorchester.	Mrs. T. A. Pearce.	Mrs. Maurice Sheridan.
J. Gerard - Pearse, Esq., F.R.C.S., of 11, Royal Terrace, Weymouth.	Dr. T. H. Sanderson- Wells.	W. de C. Prideaux, Esq.
Mrs. J. Gerard-Pearse, of 11, Royal Terrace, Weymouth.	„	„
A. F. Grimley, Esq., of St. Crispin's, Sherborne.	Captain J. E. Acland.	Lt.-Col. M. J. Raymond.
Mrs. J. Hastings, of Win- combe Park, Shaftesbury.	E. R. Sykes, Esq.	Mrs. Harvey French.
The Rev. C. S. Pugh, of Buckland Ripers, Rectory, Dorchester.	The Rev. R. Grosvenor Bartelot.	Miss Thresher.
Wyatt Wingrave, Esq., M.D., of Lyme Regis.	W. de C. Prideaux, Esq.	Dr. F. H. Haines.



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The Proceedings
OF THE
Dorset Natural History and Antiquarian
Field Club.

FROM MAY, 1920, TO MAY, 1921.

FIRST SUMMER MEETING

6th July, 1920.

In consequence of the difficulty of arranging hotel accommodation for a large party, it was thought advisable that there should be no "long" excursions this year; but that the summer meetings should be confined to places which are easily accessible by train. The Secretary was, however, able to arrange three "one day" meetings, the first of which was held on Tuesday, July 6th, at

PORTLAND.

About 60 tickets had been applied for beforehand; but, owing to the heavy downpour of rain in the early morning, the number of members, &c., present was reduced to less than 40. Amongst these were the President (Mr. Nelson M. Richardson), three of the Vice-Presidents (Rev. H. Pentin, Capt. G. R. Elwes, and Canon Fletcher) with the Assistant Secretary (Mr. H. Pouncy). The journey from Weymouth was made by motor car, viâ Wyke Regis and along the Chesil Beach road. The visitors alighted in Easton to view the spacious and dignified new church of All Saints, under the guidance of the REV. H. PENTIN, who kindly acted as cicerone throughout the day. Attention was drawn to the quaint, typical Portland building which bears over its porch the

incised inscription "John Stevens, 1734," and is known as *Charles Wesley's Cottage*. The Jacobean *Free School*, the oldest educational establishment in the Island, was pointed out, as, too, was *The Girt House*, all that now remains of what was once the spacious Jacobean building supposed to have been erected by the Governor of the Island for the transaction of official business. Here it was that Governor John Penn resided while Pennsylvania Castle was being built. *The Girt House*, or to speak more correctly, what remains of the Girt House, is now divided into three tenements. The thatched Carolean cottage, dated 1662, also attracted notice; and Mr. Pentin pointed out in the stone porch of a cottage (79 Wakeham Street) the *holy water stoup*, which is said to have been taken from the ruined church of St. Andrew at Church Ope. The party was then conducted to the *Chalklands Quarry*, where the PRESIDENT stated that

All over the top of Portland one got fresh-water Purbeck strata, and, therein, the dirt bed with fossil trees and cicads growing. The stumps of trees were to be found in the dirt bed, and the trunks of trees lying in the stratum above it. In the beds below were cicads only—tree ferns. Then came the Portland stone, a marine formation, in which were found marine fossils, including the *cinoliosaurus*. Of this he had in his procession, at Montevideo, a tooth, which, so far as he was aware, was unique. Beneath the Portland stone was Portland sand, and, below that, Kimmeridge clay. Geologists had called attention to the curious formation called the "Weymouth saddle"—an anticlinal.

The party then descended to the Weares, where a short paper was read by the PRESIDENT on "*Insects and Plants found in Portland*." (Printed on pages 25 to 30 of this volume). For further details his hearers were referred to a paper by the late Mr. W. Bowles Barrett, printed in Vol. XXXIII. of the Club's *Proceedings**, and also to a paper which he had himself written on the Butterflies and Moths of the Island, and which would be found in Vol. XVII.† of the same series. Mr. Richardson pointed out that the development of the quarrying industry, which had destroyed the great Neolithic burying

* *Proceedings of the Dorset N. H. and A. Field Club*, Vol. XXXIII, pp. 96-143.

† *Ibid.* Vol. XVII, pp. 146-191.

place and many of the ancient dene holes, had also been instrumental in removing not a few of the objects which were of interest to naturalists.

Luncheon was partaken of in picnic fashion on the Weares, after which, by the courtesy of Mr. Henry Sansom, the members were conducted into the grounds of *Pennsylvania Castle*. On the way Mr. Pentin pointed out, with regret, the ruinous condition of the picturesque Carolean Cottage, bearing the date 1640, which Mr. Thomas Hardy made the home of Avie in his novel *The Well Beloved*. The party then visited Baron Nolcken's lodge, Governor Penn's billiard house, Rufus Castle, and the ruined Church of St. Andrew, where ash and sycamore trees are springing up in the nave.* After rambling round the gardens of Pennsylvania Castle, tea was partaken of, and hearty votes of thanks were accorded to Mr. Sansom for his kindness in permitting the members to visit his grounds, and to Mr. Pentin for so ably acting as a guide.

A short business meeting followed, when six members were elected by ballot, and six were nominated for membership.

The President took the opportunity of congratulating Canon Fletcher on "the beautifully-produced book,† which had been prepared under his editorship, and was mainly due to his pen, and which was marked by the fine qualities of antiquarian knowledge and scholarship." It had been written by request of the Cathedral Chapter for presentation to the Bishops and Deans from various parts of the world who took part in the commemoration of the 700th anniversary of the stonelaying of the present Cathedral at Salisbury which had taken place a fortnight previously.

On the way homewards the party stopped at the offices of the Bath Stone Firms in order to inspect the fine collection of fossilised cicads, ammonites, &c., and their casts.

* The antiquities of Portland are dealt with at some length in an Article in *D.F.C. Proceedings*, Vol. XXXVII, pp. 228-253.

† *Notes on Salisbury Cathedral*,—Salisbury Messrs. Brown, The Canal, and Mr. H. Simmonds, High Street. Price, 3/6.

SECOND SUMMER MEETING.

12th August, 1920.

The second meeting of the session was held on Thursday, August 12th, at

EGGARDON HILL AND POWERSTOCK.

It was a glorious summer day, and there was an excellent attendance of members, &c., who numbered about 70. To the regret of all, the President, Mr. Nelson M. Richardson, was unavoidably prevented from being present. But his place was taken by one of the Vice-Presidents, Mr. Alfred Pope, F.S.A., who acted as President for the time being. The itinerary had been admirably arranged by the Hon. Secretary, the Rev. Herbert Pentin. The party assembled at

MAIDEN NEWTON

and the hour during which they had to wait for the Powerstock train was spent in an inspection of the church. The mutilated churchyard cross was examined, and the Norman, Early English, Decorated and Perpendicular details of the church were carefully observed. The sundial bears the date 1638. The remains were afterwards visited of what was once one of the finest village crosses in the county, standing opposite the White Horse Inn.

On alighting at Powerstock station the members of the party made the two-mile ascent to the prehistoric fastness of

EGGARDON

where picnic luncheon was partaken of. Although it was somewhat hazy, the members were able clearly to identify the outstanding heights of Shipton and Thorncombe Beacons, Golden Cap, Lambert's and Conig's Castle, Pilsdon Pen, and the wooded slopes of Lewesdon Hill, upon which the Rev. William Crowe, rector of Stoke Abbott, wrote his famous descriptive poem. The contours of the tree-plumed crests of Loders Hill and Boarsbarrow were also visible. After

luncheon and a short rest, Mr. Pope called upon the REV. H. SHAEN SOLLY to read a paper on Eggardon Hill. (This will be found printed on pages 31 to 35 of this Volume).

MR. C. S. PRIDEAUX stated that he had spent two months on Eggardon Hill under canvas with the intention of opening several of the hut circles. A large trench stone at the bottom of one of them proved to be a broken quern, which it was discovered afterwards had come from a place near Exeter. Some of the burial places he had found excavated. The skulls of the interred were neither long-headed nor round-headed. The skeletons were lying upon their backs with their heads towards the east and their feet towards the west. Nothing was buried with them which would have helped to identify them. He drew the attention of the members to a fine ring barrow a short distance away.

MR. A. POPE, in proposing a hearty vote of thanks to Mr. Solly for his paper, said that he would have liked some comparison to have been drawn between Eggardon and Maiden Castle. To his mind Eggardon was considerably the older, and justified the saying common in that neighbourhood "as wold as Haggardon."

Upon descending the hill

KING JOHN'S CASTLE*

was next visited. The REV. R. W. H. DALLISON, a former Vicar of Powerstock, thought that King John's object in building a Castle in such an out-of-the-way place was that he might levy tolls upon the merchants who travelled by that route from Bridport to Dorchester. They had only to scrape the earth of the grassy mounds on which they were sitting to find the masonry of the foundations. The whole of the castle was demolished and the stone worked into the houses of Powerstock, while inferior stone appeared to have been burnt in a kiln near by.

* *D.F.C. Proceedings*, Vol. XX, p. 138.

MR. C. S. PRIDEAUX said that a fortnight, which he had also spent there in digging, seemed to prove that a Norman house of some sort had been erected on that spot. He had taken away three barrowloads of pottery. It was debased spun pottery, very crude and rough. He had also found a bronze implement and a quantity of hewn stone. He called attention to the following names in the vicinity which supported the theory that there had once been a castle at that spot:—Castle Brow, Castle Drang, Knights' Mead, Castle Mill, Spyway, &c.

THE REV. R. G. BARTELOT said

Once possessed of Poorstock, King John started building operations with great vigour. On April 7th, 1205, the Sheriff of Devon was ordered to deliver at Bridport one hundred-thousand nails "for building our houses at Poorstock;" and on November 13th, the Sheriff of Dorset was ordered to be repaid "what he had laid out on the repair of the King's houses at Poorstock and for stocking the manor thereof." On June 1st, 1206, the sum of £104 was ordered to be paid for work done on the King's houses at Poorstock, and fifty pounds more in 1208; and on February 18th, 1207, one barrel of wine was ordered to be sent there by the King. He also had one tun of wine carried there on July 6th, 1207, and three barrels of Anjou wine on March 21st, 1208. Nor was Poorstock only an expense, for on March 31st, 1208, the King received in his Chamber by the hands of Robert Peverell £130 of the issue of the lands and appurtenances which the said Robert had as custos of Poorstock. The place where this castle stood is still visible above Nettlecombe, near Bridport. Huge mounds, covered with grass, now mark the site of the old Norman keep and the inner and outer wards, enclosing an acre or more of hill-top and dominating the whole stretch of fertile hill and vale from the ancient British fortress of Eggardon on the East to Shipton Beacon, Golden Cap, Hardown Hill, Pillesdon Pen and Lewesdon Hill on the South, West and North. The excavation of the ruins of Poorstock Castle would bring to light most interesting details concerning this Dorset home of that sovereign, whose erratic rule endowed succeeding generations with the Great Charter of all Englishmen. King John was visiting at Poorstock on August 25th, 1205, to inspect his new building. Two years later he appears to have kept his house-warming there, March 29th and 30th; visiting there again on September 8th, 1207, and doubtless made merry with the wine which the Sheriff of Dorset had procured at his orders. Again in 1210 the King spent September 27th, at Poorstock; this time with larger retinue, for three tuns of Anjou wine had been maturing in Poorstock's capacious cellars! In 1213 he paid a summer visit to this delightful spot, from July 29th to 31st, this being probably his last sojourn in the castle which owed its existence to the most cruel of English sovereigns. On the death

of King John, October 9th, 1216, leaving the crown to his son Henry, then aged only ten years, the royal hunting parties in the Chase of Poorstock came to an end, though its castle remained in royal hands until 1266, when Henry granted it to Sir Ralph de Gorges, of Bradpole.

Tea was subsequently partaken of on the lawn of Powerstock Vicarage, by kind permission of the Rev. W. F. and Mrs. Rickman. A short business meeting followed when six members were unanimously elected by ballot, and the names of five others were proposed for membership.

The HON. SECRETARY mentioned that Mr. C. J. Cornish Browne had kindly again undertaken to be a Director of the Dorset Photographic Survey, a work which had been almost entirely in abeyance during the war. Mr. Cornish Browne had recently added more than 350 photographs to the magnificent collection in the Dorset Museum at Dorchester. Few of their members realised the immense wealth of this collection.

The club sanctioned the expenditure of £5 on mounts for the photographs.

POWERSTOCK CHURCH

was then visited, under the guidance of the Vicar, the REV. W. F. RICKMAN, who drew attention to the following features :—The Tower, the lower part of which is early Norman; the Chancel Arch with its sculptured capitals and ornamented pillars, (*circ.* 1100) and two Hagioscopes (15th century); the Early Decorated Columns of the South Aisle; the 14th century opening to the Rood Loft in the North Aisle :—The South Doorway, with carved figure of the Blessed Virgin Mary, and on either side a King and Queen. Reference was made to the bells, the fourth of which is dated 1684, and to the Parish Registers, which go back to 1568.

THIRD SUMMER MEETING

AT PORTESHAM.

16th September, 1920.

The last of the summer meetings, which was held at Portesham on Thursday, September 16th, proved most interesting, and was attended by about 80 members. By the kindness of Mr. and Mrs. W. Hardy Manfield, who now occupy

PORTESHAM HOUSE,

the ancient home of Admiral Sir Thomas Masterman Hardy was thrown open for the inspection of the members, who were thus enabled to see the remarkable collection of relics of Nelson's trusty and favourite flag captain.

In the garden is a picturesque sundial, dated 1767 and bearing the name of Joseph Hardy. A considerable amount of interest, too, was shown in the collection of fossils. With respect to these the PRESIDENT said that the fossil tree stumps came from beds corresponding to the Portland beds, nearly all being portions of fossilised coniferous trees. Up in the quarry at Portesham was what the men called a "fossil elephant." In reality it was only a large tree coated with a deposit. The so called "fossil bird's nest" was a cicad such as could be seen at Portland growing out of dirt beds.

The attendance was so large that the members of the Club had to be conducted in parties over the house, which for many years was the home of the great seaman who was flag captain to Nelson on board the Victory at the crowning battle of Trafalgar. It was immediately after the battle of the Nile that Hardy was invited by Nelson temporarily to fill the place, on the flagship Vanguard, of his flag captain who had been sent home with despatches. It was then that the long and intimate association of these two bosom friends began. Hardy served his idolised chief on no fewer than six

or seven ships. He afterwards became Admiral Sir Thomas Hardy, and ended his life as Governor of Greenwich Hospital. Some number of the articles comprised in this unique and priceless collection of Nelson and Hardy relics are usually deposited for security in the strong room at the Bank, but they had been brought out in readiness for the visit of the Club, and were set on tables, or hung on the walls of the house, for convenience of inspection. Perhaps earliest in date was the will of Thomas Masterman of Kingston Russell (1763). It was from him that Hardy got his two Christian names; and it was in the fine old manor house of the Bedford family at Kingston Russell that he was born in the year 1769; and not, as is so often wrongly stated, at Portesham, though his family removed there afterwards. Amongst the pictures on the walls were contemporary engravings of some of the famous engagements in which Captain Hardy took part, including three of the battle of the Nile. Amongst the most interesting objects exhibited might be noted miniature portraits of Hardy; his Nile medal; his shirts and ruffles; his buckskin breeches; his Prayer Book; pieces of old cabin furniture; printed playing cards; a ship's lantern from the victory; some number of his letters, in one of which, dated August 18th, 1805, a little more than a month after the battle of Trafalgar, he writes "We fancy ourselves very unfortunate, after so many anxious moments, to have missed the combined squadrons." Then there was a beautifully executed painting in profile of Nelson as Duke of Bronte with the corresponding portrait of the King of Naples. Hardy's portrait by R. Evans was accompanied by a richly-illuminated vellum conferring upon him the freedom of the City of London, on January 30th, 1806, and a sword of honour for which 100 guineas had been voted. This was dedicated "as a testimony to the high sense which this court entertains of his excellent behaviour on Lord Nelson's flagship Victory on the 21st October, 1805, at the memorable defeat and capture of the combined fleets of France and Spain off Trafalgar." On one of the tables was laid a copy of the special edition of the *Times*, of Friday,

January 10th, 1806, which contained a full descriptive report of the funeral of Lord Nelson, in which solemn pageant Hardy bore a very prominent part. Perhaps the most touching of the exhibits was the thin lock of Nelson's hair placed under a glass, given by Lady Hamilton to the Prince of Wales. There was also on view the patent conferring the Baronetcy upon Hardy. Like the Duke of Wellington, Admiral Sir Thomas Hardy once fought a duel. It is thus recorded in *Bell's Weekly Messenger* of June 18th, 1816:—"Affair of Honour.—Yesterday afternoon, in consequence of a dispute at the Opera House on Saturday night, a meeting took place between the Marquis of Buckingham and Sir Thomas Hardy. After an exchange of shots the seconds declared that enough had been done to satisfy the honour of both parties, and the affair concluded."

When the members had reassembled on the lawn the PRESIDENT expressed the warm thanks of the Club to Mr. and Mrs. Hardy Manfield for their great kindness in allowing the members to visit their interesting home and to view their rare collection of Hardy and Nelson relics. For himself it had been a revelation, as no doubt it had been to others. He had no idea that there was such a wealth of these objects in their possession, and he heartily congratulated them upon being the possessors of such treasures.

The hillside of Ridge Hill, where stands the grizzled cromlech called

THE HELLSTONE

was then climbed. Here luncheon was partaken of, and the expansive prospect of sea and land was enjoyed. After luncheon MR. VERE L. OLIVER read a short paper on the Hellstone, which consists of a dolmen of upright stones with a table stone 11 feet long. (The paper is printed in full on pages 36 to 41 of this Volume).

The PRESIDENT, in heartily thanking Mr. Vere Oliver for his paper, observed that he had not touched upon the origin of the sarsen stones. They were supposed to have come from

a bed of sand in the Tertiary formation in which these large concretions were formed. The sand was washed away by denudation, leaving behind them these large sarsen stones. Numbers of them might be seen in the Valley of Stones not far away. He believed that there was no trace of them *in situ* in their original place anywhere.

MR. OLIVER, in reply, stated that, in the sand beds at Bagshot, they found large hard cones which the local people probed for and then broke up for building stone.

After, by the courtesy of Mr. and Mrs. Ernest Saunders, inspecting the fine Tudor Manor House at Portesham, which is now their residence, the party proceeded to

PORTESHAM CHURCH

which was briefly described by the Vicar, the REV. SIR JOHN C. MOLYNEUX, BART. There are clear evidences, especially on the north side, of the old Transition-Norman structure, though the greater part of the present church is of the Perpendicular period. In the North wall the abaci with quirk and chamfer of the old Norman pillars of the Nave are to be seen. The priest's doorway, the tower arch and font are of the 13th century. The fine embattled tower with bell turret was noticed with interest, as, too, were the small carved weather-worn stone panel containing a representation of the Madonna and Child; the dole table; and, within the church, the Jacobean pulpit; the panelled semi-circular vaulting; the two hagioscopes; and the remains of the rood loft. Some curious tombstones were observed in the Church and Churchyard, e.g., those of William Weare (1670), Mary Weare (1675) and the Rev. John Galpin (1681).

Upon leaving the Church, the party repaired to the gardens of the King's Arms Hotel for tea. A short business meeting followed, when five, who had been previously nominated, were unanimously elected members, in addition to which ten candidates for membership were nominated.

The HON. SECRETARY stated that the membership of the Club, which, as might be expected, had suffered a set-back during the war, was rapidly recovering.

FIRST WINTER MEETING,

7th December, 1920.

About forty members were present at the opening meeting of the Winter Session of the Field Club, which was held in the Reading Room of the County Museum at Dorchester, on Tuesday, the 7th of December, at 12-30 p.m.

Owing to an attack of influenza, the President, Mr. Nelson M. Richardson, was obliged to be absent, and Mr. Henry Symonds, F.S.A., one of the Vice-Presidents, was voted to the chair. He was supported by the Rev. Herbert Pentin (Hon. Secretary), Capt. J. E. Acland, F.S.A. (Hon. Treasurer) and Canon Fletcher (Hon. Editor), with Mr. H. Pouncy (Assistant Secretary).

On the proposition of MR. H. SYMONDS and CAPTAIN ACLAND it was decided that a letter of congratulation should be sent to Mrs. Richardson on her receiving the Order of the British Empire. CAPTAIN ACLAND said that Mr. and Mrs. Richardson had proved invaluable during the war. They had shown great kindness to the Australian troops who had been located in the camp opposite Montevideo. Their house had been quite a home to the men, who would, he felt sure, join the club in sincere pleasure that this small recognition of her devoted work had been conferred upon Mrs. Richardson.

ELECTION OF MEMBERS. Ten persons who had previously been nominated as Candidates for membership in the Club were balloted for and unanimously elected. And, in addition, there were eight nominations for membership.

It was stated that the New York Public Library had become affiliated to the Field Club.

CONFERENCE OF DELEGATES TO THE BRITISH ASSOCIATION. SIR DANIEL MORRIS, K.C.M.G., D.Sc., D.C.L., one of the Delegates from the Field Club to the British Association Meeting, at Cardiff, August 24th to 28th, 1920, who was prevented by illness from being present, sent the following report.

The first meeting of the Conference of Delegates took place on Wednesday, August 25th, when the Presidential Address was delivered by Mr. T. Shepherd, M.Sc., F.G.S., on "The Evolution of Topographical and Geological Maps." This was illustrated by an interesting series of maps of great value. The second meeting was held on Friday, when a discussion was opened by Mr. William Whitaker, F.R.S., on "The Status of Local Societies,—the means of developing their objects, of getting new members, of making announcements and of publishing papers." As Mr. Whitaker has been clearly associated for many years with the making of local Scientific Societies, the suggestions put forward by him for their extended usefulness were received with general approval. At both meetings of the Conference there was a good attendance of Delegates; and it is proposed that a report of the Proceedings will be published in due course. In the meantime, in accordance with a resolution adopted by the Conference, the Council of the Association was asked to call a further meeting, to be held in London, at which the Officers of Local Societies, as well as Delegates, might be present and discuss more fully the best means for developing the aims and objects of Local Naturalist Societies.

December 4th, 1920.

D. MORRIS.

MANSEL-PLEYDELL PRIZE. It was reported that the Mansel-Pleydell medal and prize of £10, for 1922, would for the first time be offered for an entomological subject:—"The distribution of any one Order of Insects in Dorset, with suggestions as to the limiting causes."

EXHIBITS.

(1). By CAPTAIN ACLAND:—

(a). A photo-reproduction of a map of Great Britain in the British Museum, drawn by Matthew Paris, A.D. 1250.

(b). An earthenware jar, recovered from the bottom of Portland Harbour, while sweeping for a lost paravane.

(c). A stoup (?), found (at Westworth) near Edmondsham.

(2). By MISS E. HAMILTON DICKER:—

Some Chinese embroideries.

(3). By MR. HENRY SYMONDS, F.S.A.:—

Five old, beautifully ornamented, keys,—three of the 16th century, one of the 17th, and the other of the 18th century. The latter one was supposed to be of the Chippendale or Hepplewhite period.

(4). By CANON FLETCHER:—

“The Archdeacon of Dorset’s Book,”—upon which he read the following notes:—

This MS, as may be seen, is neatly written, in a quarto volume of some 170 “folios,” and is bound in vellum. It is generally known as “the Archdeacon’s Book,” and has been in the custody of successive Archdeacons of Dorset from the time when it was written. It has recently been placed by Archdeacon Dundas in the custody of the Cathedral Librarian at Salisbury, to be deposited as a perpetual loan in the Cathedral Library. It has apparently been compiled mainly from replies given to the enquiries made at various Archidiaconal Visitations, although some use appears to have been made of Bishop Smalridge’s* Visitation returns. The Institutions to the various parishes are also recorded. The book includes a period of upward of 40 years:—viz., from 1736 to 1780, during which time Edward Hammond (1732-1762) and John Walker (1762-1780) held the office of Archdeacon:—and there were no less than nine Bishops† of Bristol! The Volume is in the same handwriting throughout. Consequently some part of it must be a fair copy of an older document, or of rough notes previously compiled. It is of considerable value, because of the light which it throws upon the condition of Church Life and Church Services in the County of Dorset in the middle of the 18th Century. It omits all records of Wimborne Minster with the other Royal Peculiars, as well as of the 37 Churches belonging to the Dean of Salisbury, as being outside the pale of Archidiaconal Jurisdiction.‡ But it gives particulars, in the parishes of the County, as to the value of the livings, the Stipends paid to Curates, the Institution of new Incumbents, the Services held, the number of times the Holy Communion was celebrated in the year (usually four times, though both at St. Peter’s and at Holy Trinity, Dorchester, it was six times). Catechising the children was in most places confined to the summer months, although in some number of cases it took place in Lent. At Manston it was “as often as the parents will send them”; and at Toller Fratrum “every Sunday with Lewis’ Exposition.” Statistics are frequently given as to the population, with the number of ‘Papists,’ ‘Presbyterians,’ ‘Dissenters,’ (i.e., Independents or Congregationalists), ‘Methodists,’ and ‘Anabaptists.’ The proportion of Communicants varies considerably. Thus Swanwich with 228 families has

* He was Bishop of Bristol, 1714-1719. The County of Dorset was in the Diocese of Bristol from 1542 until 1836, when it was restored to its former Diocese of Salisbury.

† During the 18th Century Bristol had 19 Bishops.

‡ Gillingham, however, and Milton Abbey, which are stated to have been “Peculiars,” are included in the Archdeacon’s Book.

cf. *D.F.C. Proceedings*, Vol. XXXVIII, pp. 94-96.

174, while Stoke Abbot with 100 families has seldom more than four. But few Churches have Service on Good Friday. Ascension Day I have found no mention of at all. In 1737 John Hutchins, who was Incumbent of Swyre, resided at Melcomb Horsey. Swyre was worth £47. The Curate was paid £17 a year. In 1766 the historian of Dorset, while still holding Swyre, was "residing at his other living of Wareham." He died in 1773.

The following, typical extracts, refer for the most part to parishes in, or in the neighbourhood of, our County town :—

Dorchester All Saints depended chiefly on contributions. The Incumbent, John Jacob, was resident. There were one Papist and some Presbyterians. There is an Anabaptist meeting-house: their teacher was Mr. Seymour, a taylor. The Church hath a tower and three bells. Seth Banks, B.A., was instituted February 19th, 1759. In 1766 there were about 80 families, 5 of which were Presbyterians; No Methodist; No Baptists. Mr. Banks lives at Fordington and serves Brodmain as well as his own Church. Services every Sunday—one in the morning, the other in the afternoon. Children are catechised in Lent, and at other times occasionally. July 15th, 1769, John Rendall, B.A., instituted. On September 29th, 1774 Thomas Bryer, B.A. "was instituted at Bristol after taking Orders."

Dorchester St. Peter and St. Trinity with Frome Whitfield St. Michael (the last mentioned a peculiar under the Dean of Sarum). £200, but this belongs to the small Church of ye Trinity. *All Saints* the large Church is of no value. Incumbent, Wm. Leigh, Rector also of Litchet Matravers. Resident here, the Curate, John Ellis. Three or four Papists, one person lately perverted. A Dissenting meeting-house, teacher, Baruch Nowell. In 1752 John Hubbock, M.A., instituted, resident. In 1766, number of families in Holy Trinity 124, in St. Peter's 108; five or six only Dissenters of the Independent sect; No Methodists; No Papists. Mr. Hubbock, Master also of the Free Grammar School and lives in the School House. The Parsonage House being only a poor thatched cottage. He does all the duty and preaches twice every Sunday—once in each Church alternately. Prayer, Wednesdays, Fridays and Holy Days at Trinity and every Sunday at St. Peters. Sacrament administered every first Sunday in the month at each Church alternately. Communicants 150, but sometimes 200. In 1767 no Papists.

Portland St. Swithin. Patron, Bishop of Winchester. £120 or £140. Incumbent, Daniel Harris, resides at Weymouth, the Parsonage House being destroyed long ago. Parish governed by Select Vestry of long standing. Rector uneasy about it, but advised to acquiesce. No Dissenters or Papists. Their way of conveyance is by delivering a straw in the Church porch. Their accounts is by notches cut in sticks. The Church has a Tower, but no bells. There has been no Confirmation. In 1763 whilst the Church was rebuilding, Service was performed in a Tabernacle. The Church was consecrated in 1766.

Chickerill. The Incumbent, Timothy Terrall, resides at Litchett Matravers as Curate. The Minister of Langton, the next parish, serves this. In 1749, John Jessett was instituted. On his death Thomas Stevens was instituted by me|| at Bristol, July 31, 1750. He proposes to employ Mr. Franklyn. Richard Dauberry, licensed Curate in absence of Mr. Stevens aboard the Fleet, May 6, 1762, with a Salary of £22.

Frome Vauchurch. John Hubbock, M.A., instituted by me|| June 8. 1738. (He was promoted to the livings in Dorchester in 1752).

Fleet. William Allen, senior, witholds the accustomed tithes of Fish, and others do it after his example.

Chalbury. No children that can read.

Cattistock. R. Incumbent, John Haynes, Chaplain to Bishop Hall, resides, hath built a Parsonage House and repaired the Chancel. Middle sized parish. No Papists or Dissenters. Belongs to Milton Abbey. Incumbent, Mr. Haynes, was instituted to this living in 1700, and appeared at the Visitation 1752 in high health, having recovered of the Small-pox about two years before. William Churchill instituted September 18, 1758.

Frampton. Market Town. Large Parish. 17 Presbyterians ; 20 Papists. Mr. Colson, excused residence here on account of the strange behaviour of the present Esquire, lives at Dorchester. The whole country in a manner petitioned in his favour giving him the best and the Esquire the worst of characters. 1766, about 70 families : No Papist : No Dissenters : No Methodists.

MR. H. SYMONDS observed that the method of keeping accounts by means of notches cut in sticks, alluded to by Canon Fletcher, was a survival of the old Exchequer tallies.

THE HON. SECRETARY and CAPTAIN ACLAND reminded the Chairman of the reeve staves* by which the accounts of the Royal Manor of Portland are still kept in connection with the Court Leet.

|| The Institution was apparently regarded as an Archidiaconal and not as a purely Episcopal act.!!

* D.F.C. *Proceedings*, Vol. XXXVIII, pp. 53—58.

PAPERS.

(1). A Paper on "Portland, extracted from the *Travels of Peter Mundy, Cornishman, in England, in 1635*, edited by Sir Richard Temple, Bart., for the Hakluyt Society" (the extracts being made by his kind permission) had been prepared by the President, MR. NELSON M. RICHARDSON. In his unavoidable absence it was read by the Hon. Secretary. (*Printed*).

(2). A Paper on "The Apple Tree Wassail: A survival of a Tree Cult," by MR. W. O. BEAMENT, M.A., was, in his absence, also read by the REV. HERBERT PENTIN. (*Printed*).

MR. S. RODD stated that orchard wassailing was still kept up in his own parish, Chardstock. He referred, also, to parishes which have a permanent Maypole, and alluded to the old custom of "crying the neck," practised in Cornwall and Devon as well as (he thought) in West Dorset and elsewhere in the olden days—an ancient ritual celebrating the garnering of the last sheaf in the harvest field.

(3). "The Church Screens of Dorset," by MR. E. T. LONG. (*Printed*).



SECOND WINTER MEETING.

1st February, 1921.

There was again a largely-attended gathering of members in the Reading Room of the County Museum at Dorchester, on Tuesday, the 1st of February, for the Second Meeting of the Winter Session of the Club. The Chair was taken at 12-30 p.m. by the President (Mr. Nelson M. Richardson), who was supported by four Vice-Presidents:—the Hon. Secretary (the Rev. Herbert Pentin), the Hon. Treasurer (Capt. J. E. Acland, F.S.A.), the Hon. Editor (Canon Fletcher), and Mr. Alfred Pope, F.S.A., with the Assistant Secretary (Mr. H. Pouncy). Between forty and fifty members of the Society were present.

ELECTION OF MEMBERS. Seven persons, who had been nominated at the previous meeting, were balloted for and duly elected. There were, in addition, eight nominations for membership.

REPORT OF DELEGATES TO CONGRESS OF ARCHÆOLOGICAL SOCIETIES. The Report of the Delegates (Canon J. C. M. Mansel-Pleydell and His Honour J. S. Udall, F.S.A.), of the proceedings of the Annual Meeting of the Congress held in the rooms of the Society of Antiquaries, on 26th November, 1920, was read, in their absence, by the Hon. Secretary.

(a) The Report of the Council of the Congress was submitted, in which it was stated that, as the result of the report of the Bishop of London's Commission upon the City Churches, the Council had forwarded to the Secretary of the Commission an intimation of its desire to be associated with the Society of Antiquaries in protesting against the threatened demolition. (b) Sir Hercules Read, P.S.A., in speaking about the "Ancient Monuments Consolidation and Amendment Act, 1913," advocated the appointment of competent advisory bodies to which the Dean and Chapter of the Cathedral, or, with regard to Parish Churches, the Chancellor, could apply for advice. Even though the Dean and Chapter, or the Bishop and Chancellor, *need* not consult such a body, yet its existence would have a good effect. (c) Mr. J. Watson Taylor introduced the subject of "The best means of preserving ancient documents in private hands."

It was generally thought that the county was the natural area for the preservation of such documents, and that there should be in every county an association for that purpose. Opinion was divided as to whether these should be the local archæological societies, or whether the County Councils would be the better custodians. (d) Mr. O. G. S. Crawford (Ordnance Survey) opened a discussion upon "The necessity for the more systematic survey of British Antiquities." The Ordnance Survey Authorities were willing to insert such upon their maps, if the necessary materials were supplied to them by the proper local authorities; and a new officer had been appointed to see to this. For this purpose large scale maps are being issued to local Archæological Societies; and the results, when completed, will be published in the ordinary survey maps, and possibly also in special archæological maps.

SYMONDSBURY CHURCH. Mr. Alfred Pope, F.S.A., had been asked to lay before the Society the Report made by Mr. C. E. Winmill to the Secretary of the Society of Antiquaries (Mr. A. R. Powys) relative to the proposed alterations to Symondsbury Church, one of the few churches remaining in an eighteenth century condition, and which formed an excellent illustration of scenes in Thomas Hardy's Books. The PRESIDENT, CAPT. ACLAND, MR. W. DE C. PRIDEAUX, REV. H. PENTIN and CANON FLETCHER all commented upon the Report, the latter pointing out strongly that, while he yielded to no one in his interest in antiquities and in his desire that there should be no unnecessary tampering with ancient features, yet it must be remembered that the object of a Church was the worship of God and the edification of the worshipper. He knew from experience what Symondsbury church was like. Twice he had, in the dead of winter, conducted "Call of the War Missions" there. The central tower was the only old feature of the Church, and the ground had gradually been raised within and without the Church, so that the arches had become very low. Nearly half the seats had their backs to the altar. There were high pews. The Church was lighted by means of one candle stuck between each pair of pews. There was no means of heating. Stone tracery had been removed from the windows and replaced by iron. The whole place was

depressed and depressing. There could be no hope of attracting a congregation without radical alteration and thorough restoration, and he rejoiced to know that a move was being made.

EXHIBITS.

1. By the PRESIDENT :—

(a). A miniature of S. John the Baptist, on a leaf of a 15th century Antiphonarium.

(b). Two small editions of the Bible in verse, by Simon Wastell, 1629, and Samuel Wesley, 1715.

On these he read the following note :—

It is interesting to remember, in connection with the two little books which I have brought for exhibition, that the first attempt of which we have any record at a translation of the Bible into the language of this country took the form of a poem by Cædmon (d. 680), the cowherd of Whitby, afterwards a monk, in the 7th century. The story is related by Bede (672—735) of how he was unable to sing, but, being encouraged by a divine messenger in a dream, he produced this poem, which comprised much of the Old and New Testaments. His work is preserved in a MS. of the 10th century at Oxford. A 12th century metrical version of part of the New Testament is known, and there were others in verse, of the Psalms and other parts specially suited for metrical rendering. King Alfred is said to have been one of these poet translators.

The first metrical version of any portion of the Bible in English, since the appearance of Coverdale's English Bible in 1535, is the celebrated metrical version of the *Psalms* by Sternhold & Hopkins, which appeared in a modified form in 1549 and afterwards went through a great number of editions. A metrical version of *Solomon's Song* by Wm. Baldwin appeared the same year, and *Proverbs* by John Hall in 1550, part of *Acts* by Christopher Tye in 1553, and part of *Daniel* by Thos. Cotsforde in 1555. This last poet lived at Geneva, for, Mary being on the Throne, such a book could not have been produced by an English Author without the greatest danger. Other parts of the Bible versified in the 16th century were "*The Book of Wisdom*," "*The Wailings of the Prophet Hierimiah*," "*Genesis*," also "*The Holie Historie of King David*," and "*The Life and Death of Joseph*." "An abridgement of the Canonical Books of the Old Testament" by William Samuel, Minister, in 1569, sounds a fuller version, as does also "*A briefe of the Bible's Historie in verse*" by Henoah Clapham which had three editions, in 1596, 1603 and 1608. In 1611 came "*The Historical part of the Holy Scripture*" by Edmund Graile. We now come to the author of my first little book, Simon Wastell, who in 1623 published

"*A true Christian's daily delight*, being the summe of every chapter of the Old and New Testaments, set down alphabetically in verse." How the alphabetical part is arranged I do not know, but there is a copy in the Bodleian, which seems to be the best hunting ground for these scarce little books. I am afraid that I cannot call the volume which you have before you, "*Microbiblion* or *The Bible's Epitome in verse*," a very high-class production; and George Wither in his commendatory verses at the beginning does not say more than that it will "helpe the memorie." But 300 years give it a certain sanctity, and it is certainly a curiosity and has much matter in a little space.

Passing over any other 17th century versions, I come to my other book. The first (engraved) title calls it "*The History of the Old and New Testaments attempted in verse*, by S. Wesley, 1704," the second title "*The History of The Old Testament in verse* in two volumes 1715," which looks as if there had been a previous edition of the whole Bible in 1704, with 330 cuts instead of the 180 in the present volumes. The cuts, or "sculptures" (copperplate engravings), by Start, are rather attractive, though there is a good deal of imagination in some of them, as in Jacob's altar on p. 47, where the stone that he set up is represented as an elaborate pillar with a moulded base, with large and handsome vessels which he could not possibly have carried with him. The verse is immensely superior in quality to Simon Wastell's, and gives one a much better idea of the original. But I am not aware of any metrical version of the whole Bible that could be called a translation in the same way that the metrical Psalms are. I may mention that Samuel Wesley* was the father of John and Charles Wesley, and all seem to have had the poetical faculty more or less developed. Other books that have been partly or wholly turned into metre are *Jonah*, *Job*, *Ecclesiastes*, *Isaiah*, *Habbakuk*, *The Song of the three Children*, *Deuteronomy*, *Exodus*, *1 Corinthians*, *Esther*, &c.

There is an edition of "*The Bible in verse*" by John Fellows in four vols., 1778, which from the number of vols. may be a full translation, but I have not seen a copy.

2. By CAPTAIN ACLAND, F.S.A.

An exchequer tally-stick (Dorset), 1825, on which he read the following note :—

* Samuel Wesley was born at Winterborne-Whitchurch, of which parish his father John Wesley was rector from May, 1658, until 1662. His mother was a daughter of the celebrated Rev. John White, rector of Holy Trinity, Dorchester, "the patriarch of Dorchester." Samuel was baptised at Whitchurch, 17th December, 1662, and was educated at the Dorchester Grammar School. (D.N.B.). J.M.J.F.

The EXCHEQUER-TALLY [Dorset, 5th May, 1825] was presented to the Dorset Museum by Mr. E. Hollis, 28th August, 1920.

This tally is 2ft. 5in. long—one end is pointed, the other square, 1in.—There are 17 notches, consecutive, about $\frac{3}{8}$ in. wide, but cut very shallow and flat. The tally is an old device formerly used in the English Exchequer for the purpose of keeping accounts. An account of the transaction was written on two opposite sides of the stick, the notches being made right across an intermediate side; the stick was then split down the middle through the notches; one half, called "the tally," was given as a receipt to the person making the payment, the other half called "counter tally" was kept in Exchequer.

Different sized and shaped notches represented different sums; e.g. :—a notch 1in. deep (V-shape)=£100; $\frac{3}{8}$ in. deep=£10; $\frac{1}{4}$ in. deep but of a different shape=£1; others represented 1/- and 1d. This custom was finally discontinued in 1826, and all the old tallies collected. They were used some years later as fuel for stoves in the Houses of Parliament; and, by overheating a stove with tallies, the great fire was caused which destroyed the buildings in October, 1834.

The *Encyclopædia Brit.* gives an example of a Tally with various shaped notches, and an inscription, which appears to read—De Edv'o Ironside p' ip'um R' q' mutuat' p' annuit' iijl p' sent. solubil' ex le Sinking Fund a° xj R' R' Georg' se'di conc'. Mag. Brit. Michs xxvj die Octobr' a° Ri Ris Georg' se'di xij.*

The above is a Tally acknowledging the receipt of £236 4s. 3½d. on 26th October, 1738†, from Edward Ironside, Esq., as a loan to the King on £3 per cent. annuities, payable out of the Sinking Fund on account of £500,000 granted by Act 11, George II, c. 27. The date is written on the upper side of the tally. The £200 is notched on one of the intermediate sides, the remaining £36 4s. 3½d. on the other.‡

3. By MR. VERE OLIVER, F.S.A.

An ancient sword recently recovered from the Backwater, Weymouth.

4. By MR. R. HAYNE.

(a). A late 12th century French M.S. of the Gospel of S. Matthew on vellum in Latin, with paraphrase and notes.

* *Encycl. Brit.* 11th Edit., Vol. XXVI., p. 379.

† Not 1739, as given in *Encycl. Brit.*

See *Archæologia*, Vol. LXII, pp. 368-380; *Proceedings of Society of Antiquaries*, Vol. XXXIII, pp. 334-337; *D.F.C. Proceedings*, Vol. XXXVIII, p. 53-58.

(b). A 15th century M.S. The Hours of the Virgin, with 12 to 15 miniatures.

(c). A 17th century Persian M.S., written on 238 leaves in four columns, dated, 1614, on seal at end, in native binding of leather, richly ornamented in gold, bronze and various colours :—containing (1) The dawn of Light. (2) The book of Alexander, Nizami. (3) Khusran va Shirin, Nizami. (4) The sight heavens. (5) Laila va Majnun, Nizami.*

5. By COLONEL F. G. L. MAINWARING.

Fossil of a bivalve found embedded in the roots of a large beech near Upwey Wishing Well. The soil being shallow, the rootlets go down into the crevices of the lias, or limestone rock, some fossils thus getting caught.

6. By MR. E. SEWARD, R.G.A.

A bronze dagger, 18 inches in length, found in a quarry at Stoford. The base being mutilated, it is difficult to give the exact age; but it would probably date back from before 1300 B.C.

7. By MR. W. DE C. PRIDEAUX.

Model of font at Melbury Bubb. An old pillar reversed and scooped out.

PAPERS.

1. "The Founding of Dorchester, Massachusetts, and the Rev. John White," by CAPTAIN ACLAND. (Printed).

2. "Dorset Brasses," in continuation of the series, by MR. W. DE C. PRIDEAUX, F.S.A.

3. "Dorset Gulleries," by the REV. F. L. BLATHWAYT. (Printed).

4. "Dorset Church Roofs," by MR. E. T. LONG.

* Cf. *Encycl. Brit.*, 11th Ed. under *Nizami*, J.M.J.F.

ANNUAL BUSINESS MEETING.

10th May, 1921.

The Annual Business Meeting was held in the Reading Room of the County Museum, at Dorchester, on Tuesday, 10th May, 1921, at 12-30 p.m. The Chair was taken by the President (Mr. Nelson M. Richardson), who was supported by five Vice-Presidents—the Rev. Herbert Pentin (Hon. Secretary), Captain J. E. Acland, F.S.A. (Hon. Treasurer), Canon Fletcher (Hon. Editor), Captain G. R. Elwes, and Mr. W. de C. Prideaux, F.S.A., with the Assistant Secretary (Mr. H. Pouncy). In spite of the difficulty of locomotion, owing to the coal strike, between 30 and 40 members were present. As an instance of the effect of the strike, the journey by train from Portland to Dorchester, that morning, had occupied three hours.

ELECTION OF MEMBERS. Eight persons, who had been nominated as candidates for membership at the preceding meeting were balloted for, and duly elected members of the Club. The Hon. Secretary reported that eight further nominations had been received.

MEDALS AND PRIZES. It was reported that the Cecil Medal and Prize of £10, for the best paper on "Uses of Electricity in reconstruction after the war, and its practical generation," had not been awarded this year. The subject for the Mansel-Pleydell Medal and Prize of £10 to be awarded in May, 1922, was stated to be "The distribution of any *one* Order of Insects in Dorset, with suggestions as to the limiting causes."

ELECTION OF OFFICERS. The Officers of the Club were unanimously re-elected, viz.:—The President, Mr. Nelson M. Richardson; the Hon. Secretary, Rev. Herbert Pentin; the Hon. Treasurer, Captain J. E. Acland; the Hon. Editor, Canon Fletcher; and Mr. H. Pouncy was re-appointed Assistant Secretary. With slight changes, the sectional Committees for

the Dorset Photographic Survey, Earthworks, Numismatics and Restored Churches were also re-appointed. Colonel and Mrs. Dickson having retired from the Photographic Survey, Mr. Edwin Seward, F.R.I.B.A., of Weymouth, was appointed on the Survey, on the motion of Mr. Vere Oliver. Mr. Oliver was placed on the Numismatic Committee, and the Rev. H. M. Wellington on that for Restored Churches.

PRESIDENTIAL ADDRESS. MR. NELSON M. RICHARDSON delivered his seventeenth Presidential Address. In the course of it he mentioned with deep regret the loss suffered by the club through the deaths of Lord Digby, the Bishop of Durham, and the Bishop of Salisbury. And, in conclusion, he offered his congratulations to two of the Vice-Presidents upon distinctions which had been received by them:—Canon Mayo, one of the four surviving original members of the Club, who had just taken the degree of *Doctor of Letters* at Oxford, and Mr. W. de C. Prideaux, who had been made a *Chevalier de l'Etoile Noire* in recognition of his valuable inventions in machine gunnery. MR. PRIDEAUX, in acknowledging the compliment, reminded the gathering that the man in front of the guns was, so to speak, more worthy of honour than the man behind them. He referred to two noted Dorset airmen: Lieut. Moorhouse, V.C., of Parnham, who came down mortally wounded after making an important reconnaissance, but "made his report" before he expired; and the late Major Hawker, V.C., D.S.O., of Weymouth, who wanted machine belts very badly, and worried him (Mr. Prideaux) until he got on with them.

A very hearty vote of thanks was accorded with acclamation to Mr. Richardson, on the proposition of CAPTAIN ELWES, for another most admirable anniversary report. Their President, he added, always surprised and delighted them with the wide extent of the knowledge he showed, and the extraordinarily lucid and interesting way in which he brought matters before them.

REPORT OF THE HON. SECRETARY, (The Rev. H. Pentin).

The membership of the Club has increased considerably during the past year; but there are still vacancies to be filled. The attendance at the winter meetings has been abnormally large, and the three summer meetings were well attended. The work of the Sectional Committees has been retarded by the aftermath of the war. But on the whole the Club has made a real forward movement during the year.

MR. PENTIN drew attention to the 24 page Index of all the 41 volumes of the *Proceedings* which had been painstakingly prepared by the Assistant Secretary. It would be bound up with vol. XLI, which was just completed; and, in addition, 100 copies would be struck off, and be on sale at 1/- each. This would be appreciated by future members.

CAPTAIN ACLAND, as Hon. Treasurer, presented his balance sheet, which had been audited by Messrs. Edwards and Edwards. The year began with a credit balance of £146, and ended with a credit balance of £150. The accounts were passed on the proposition of Capt. Elwes and the President.

The PRESIDENT congratulated Capt. Acland on having done so well under adverse circumstances. He mentioned that there was a sum of £37 standing to the credit of the Mansel-Pleydell and Cecil Medals Fund.

The HON. EDITOR, Canon Fletcher, read the following report.

It is a matter of disappointment that the 41st volume of the *Proceedings* of our Club has not been in the hands of our Members some months ago; but Mr. Longman has prepared a specimen volume which he has given to Mr. Pouncy in order that it may be exhibited to those who are present to-day. The publication therefore will not be delayed much longer. The delay has been due to the addition of what will be found a most useful feature.—An Index to the whole number of volumes which have been issued since the formation of the Club. This has been the work of our painstaking Assistant Secretary.

But we are gradually getting nearer to the normal time of issue. And it is to be hoped that after this year the annual volumes will be issued to the members some time during the summer months which follow the Annual Meeting in May.

The next volume will include accounts of the excursions to Portland, Powerstock and Portesham, with reports of the Winter Meetings and of to-day's Annual Business Meeting. It will contain the usual Rainfall Statistics and Notes, and the Report of the Phenological Editor. There will also be the following papers:—The Presidential Address; with Mr. Richardson's "Notes on a few of the Insects and Plants of Portland," and a paper by him on "Portland, extracted from *Peter Mundy's Travels in 1635*." "Eggardon Hill," by Rev. H. Shaen Solly; "The Hellstone," by Mr. Vere Oliver; "The Apple Tree Wassail," by Mr. W. O. Beament; "The Church Screens of Dorset," by Mr. E. T. Long; "The Founding of Dorchester, Massachusetts, and the Rev. John White," by Capt. Acland; and "Dorset Gulleries," by Rev. F. L. Blathwayt.

It is to be regretted that the cost of production has so materially decreased the number of illustrations as well as the size of the volumes. But to a certain extent this must continue unless the rule is altered which limits the numbers of the Club, and there can be a large addition to the membership, or unless, which appears to be inadvisable (although it has been carried out by the Derbyshire and, I think, some other societies), the amount of the annual subscription is raised.

DORSET PHOTOGRAPHIC SURVEY. MR. C. J. CORNISH-BROWNE, Director of the Survey, reported that

during the past year, 353 photographs had been added to the collection. Two of these were by Capt. Acland, 24 by Mr. Ridley, and 140 by himself, whilst the remaining 187 were photographs which had long ago been mounted on Manilla sheets for binding into volumes, but which he had remounted on mounts in general keeping with the collection. The remaining photographs, 568 in number, had, with the unanimous consent of the members of the Committee, been removed from the volumes, remounted and placed in the boxes. The whole collection was now boxed together and arranged under Parishes. The expenses for the year had amounted to £6 18s. Towards these £5 had been granted by the Club at a summer meeting. The deficit had been met privately. For the purpose of the survey, the county had been divided into 12 areas, corresponding with the 12 Poor Law Divisions. Representatives were urgently needed for the Blandford, Beaminster, Shaftesbury, Sturminster and Sherborne Divisions. Additions to the collection of photographs were asked for. The collection, though perhaps little considered at the present time, will be of great interest to the future generations.

The PRESIDENT said that Mr. Cornish-Browne had done admirable work during the past year, and proved a worthy successor to the Rev. W. Miles Barnes, who started the survey.

The following report of the ACQUISITIONS TO THE DORSET COUNTY MUSEUM, May, 1920—May, 1921, was read by the Curator, CAPT. J. E. ACLAND, F.S.A.

During the past 12 months we have been specially fortunate in receiving, either as gifts or as loans a number of objects (mostly of the pre-historic or Roman periods) which have greatly enriched the different collections in the County Museum.

In October, 1920, Mr. A. D. Pass, of Wootton Fitzpaine, presented 32 fine Palæolithic flint, or chert implements, which were found about 20 years ago in the well-known Broom gravel pits, in the valley of the Axe, near Hawkchurch. They are a welcome addition to those we already possessed from the same locality; some from Mr. E. Cunnington's collection purchased in 1889, and others given by B. A. Hogg, in 1896.

A still more important collection of Palæoliths will be placed in The Museum before long, the result of many years research work in Dorset by the late Rev. W. Marsden of Moreton. I am not able to speak of them in detail to-day; but they have been examined by Mr. Reginald Smith of the British Museum, and by Mr. Sebastian Evans, and considered by these authorities to be a remarkable and valuable addition to the pre-historic relics of the County. Mrs. Marsden is most generously providing a new case to contain the whole collection, which will be deposited here *on loan*, and be called "The Marsden Collection,"

I must next refer to the Bronze-age Sword recovered from the Weymouth Backwater during the construction of the new bridge, having been brought up in the "grab" from a depth of four feet below the present bed of clay. This sword having been exhibited at the Club's meeting in February last by Mr. Vere Oliver, and having been carefully described by him at the time, I need only say that it remains in the Museum as a loan from the Weymouth Corporation. At the same meeting we acquired (also as a loan) from Mr. Edwin Seward, F.R.I.B.A., of Weymouth, a remarkably pretty Bronze-age rapier. It was found in a fissure of a quarry, which appears to have expanded into a small cavern formed in the Inferior Oolite stratum near Clifton Maybank, Bradford Abbas. The fissure was filled with the yellow sand of the locality, the rapier being 12 feet from the upper surface.

It may be remembered that some years ago the Club held a summer meeting at Ringwood and Moyles Court, when, under the guidance of Mr. Fred. Fane, the sites of Roman Pottery Kilns were visited, the description of which is given in Volume XV, of our *Proceedings*. The investigation of the New Forest Pottery sites has been carried on energetically by Mr. Heywood Sumner, F.S.A., who has presented us with specimens of typical sherds found at Ashley Rails and Sloden, and also with the printed reports of his excavations at Old Sloden Inclosure, and Black Heath Meadow,

Linwood, where he uncovered five Roman Pottery Kilns so successfully that he has been able to prepare accurate sections and plans of the component parts of the original kilns. Mr. Sumner has also presented to the Library a copy of his *Ancient Earthworks of Cranborne Chase*, one of the 1913 edition which was limited to 200 copies.

Another acquisition of the Roman period is of much interest. In digging the foundations of the Stables of Somerleigh Court, Dorchester, more than 20 years ago, five spoons of the usual Roman "curved-neck" pattern were found, and close by a number of the common 3rd Brass Roman Coins. These have all been given us by Mr. T. Lynes. One of the spoons bears an inscription "AVGVSTINE VIVAS," another spoon shews on the bowl the outline of a fish. This may suggest an original Christian ownership, rendered the more possible by the date of the coins, viz.: 360—420. A.D. They are at present in London to be exhibited at the Society of Antiquaries' meeting on the 12th inst.

Through the kindness of Lt.-Col. C. Troyte Bullock, of Benville Manor, a new Roman site has been brought to notice by the discovery of Roman red roof tiles, at Norwood Farm, $\frac{1}{4}$ mile N.E. of Corscombe Court. If a systematic investigation could be carried out, no doubt other Roman relics would be found there.

Brief mention only need be made of the fine model of the Melbury Bubb font, as it was exhibited and described by the donor, Mr. W. de C. Prideaux, at a recent meeting of the Club. It is of course of exceptional, even of unique, interest, and is referred to in *Fonts and Font Covers*, by F. Bond; in *Christian Symbolism*, by Romilly Allen; and in *Proceedings of the Society of Antiquaries*, Vol. XXVI.

In addition to these Dorset Antiquities, and a few modern exhibits, there is only one Natural History specimen to be noted:—A Molar of *Elephas Primigenius* has been presented by Mr. J. C. Tozer, of Didlington, near Wimborne, found at Brookside Cottage, Witchampton, 18 inches below the surface of the ground, where there once ran the River Allen.

MR. VERE OLIVER alluded to a Roman spoon which had been dug up at Rodwell a few weeks previously with a pointed bowl and spatula. He also exhibited a silver denarius of the Emperor Trajan, issued between 103 and 111 A.D., which had been dug up in the garden at Monksdene by Mr. Geoffrey Symes. He added that they were shortly about to start a local museum at Weymouth. They did not want the collection in the County Museum; but the Weymouth Corporation considered that there were so many local relics at Weymouth which the owners would give or loan to a local museum, that they thought it most desirable to establish one.

The PRESIDENT expressed apprehension that a local museum established at Weymouth might prove a serious rival to the County Museum at Dorchester, and divert objects of value and interest which ought to go to the senior institution. He trusted that Mr. Vere Oliver would use his influence in that direction.

The PRESIDENT read an interesting letter, which he had received from Mr. E. R. Billington of Wyke End, who had been travelling in Palestine, descriptive of his journey.

VICE-PRESIDENTS. The President re-appointed the existing Vice-Presidents. They were fourteen in number and he did not propose to add to them.

Sir Daniel Morris and Mr. Alfred Pope were re-elected delegates to the British Association, and Canon Mansel-Pleydell and His Honour J. S. Udall were re-appointed delegates of the Club to the Congress of Archæological Societies.

SUMMER MEETINGS. It was resolved to hold three one-day summer meetings during the year, if railway communications and labour troubles permitted. Twelve places had been suggested, of which Sherborne, Corfe Castle, and Shaftesbury were selected by the votes of those present. The dates and other arrangements were left in the hands of the Hon. Secretary.

Dorset Natural History and Antiquarian Field Club.

TREASURER'S ACCOUNT FOR THE YEAR ENDING DECEMBER 31st, 1920.

INCOME.			EXPENDITURE.		
£	s.	d.	£	s.	d.
To Balance brought forward			By Sime and Co., for:—		
142	4	6	Notices, Advertisements, etc.	26	9 0
10	0		Mr. F. G. Longman, Printing Volume 40,	167	15 8
31	1	0	1919, Packing, Postage	...	...
" Members' Entrance Fees and Subscriptions			Subscriptions to:—	...	...
" Donation. Vere Oliver, Esq. F.S.A.			National Trust for places of Historic	1	1 0
" Sale of Volumes and Publications			Interest	...	...
" Dividends on £500 Consols (less tax)			Congress of Archaeological Societies	2	14 0
			for Subscription and Reports	...	...
			Miscellaneous:—	...	...
			A. Kibbey, Preparing Room for	1	0 6
			Meetings, etc.	...	...
			Cheque Book	...	5 0
			Hon. Treasurer, Postages, etc.	1	10 0
			Treasurer's Assistant Honorarium,	6	5 1
			Petty Expenses and Postages	...	...
			Balance carried forward	...	...
				9	0 7
				150	4 0
				£357	4 3

JOHN E. ACLAND,

Hon. Treasurer.

February 16th, 1921. We certify that we have examined the foregoing statement of account, and find the same correct.

EDWARDS & EDWARDS,

Incorporated Accountants,

Cornhill Chambers, Dorchester.



In Memoriam

LORD EUSTACE HENRY BROWNLOW GASCOYNE
CECIL, F.R.G.S.

By **NELSON MOORE RICHARDSON, B.A.**

The Dorset Field Club has sustained one of its greatest losses in the death of its former President, Lord Eustace Cecil, which took place at Lytchett Heath on July 3rd, 1921. He was a member of the Club in its early days, having been elected in 1884, and from the beginning always took a personal and practical interest in its doings and welfare.

By his presence at its Meetings and his support in other ways, which were highly appreciated by the late Mr. J. C. Mansel-Pleydell, its first President, as well as by the present writer and the other members, he greatly contributed to make it a scientific and social success. On the sudden and lamented death of Mr. Mansel-Pleydell on May 3rd, 1902, and at the earnest wish of the members, Lord Eustace consented to undertake the Presidency of the Club, and I cannot better describe the manner in which he carried it out than in the words of Captain Elwes when proposing a vote of thanks to him at the end of the two years during which he held that post:—"They had found him everything that could be desired

in a President of such a Society. Not only had he made his mark by the extraordinarily lucid and interesting summaries of the year which he had delivered that day and twelve months ago, but they had also all felt that in him they had had a fit head of a County Club. They were especially indebted to Lord Eustace Cecil for the efforts which he had made in obtaining important accessions to the membership, as was shewn by the fact that the Club was now supported by the most influential residents in the County and was assuming its proper position." Mr. Bosworth Smith added that "he had thrown himself into the work with all that energy which was characteristic of the great Cecil family." During his Presidency he read to the Club two Addresses, chiefly on the advances of Science during the past year, dwelling perhaps especially on Archæology in connection with primitive man.*

Shortly after his retirement from the Presidency, in May, 1904, when the present writer was appointed to be his successor, Lord Eustace wrote to him a letter which will be found printed in full.† In it he alludes to the raising of a fund in memory of the late Mr. Mansel-Pleydell, from which, after paying for the execution of a portrait which now hangs in the Dorset County Museum, there remained a substantial balance. This balance he proposed to increase by the very handsome donation of £300 Foreign American and General Trust Co. deferred stock, bringing in altogether about £18 per annum, and to found therewith two medals to be called the Mansel-Pleydell and Cecil Medals respectively, with a prize of £5 attached to each, the former to be awarded for the best paper on some subject, preferably Dorset in Natural History or Archæology, and open to any member of the Dorset Field Club, the latter for Chemistry or Electricity, and open to any person born in Dorset or resident there, with certain other conditions. A resolution was unanimously passed accepting this generous gift and the scheme, which would be a lasting memorial of the two first Presidents of the Club.

* *Proceedings Dorset F. Club*, XXIII, lxxix, and XXIV, lxxii.

† *Ibid*, XXVI, xxix.

These competitions have produced a number of papers, some of great excellence, on a variety of subjects, some of which are printed in the Club's Proceedings. But Lord Eustace's interest in the Club did not cease when he resigned his office, for he was present on many occasions at its meetings, often accompanied by Lady Eustace Cecil and other members of his family, and when he was able to do so, he presented the medals.

On July 27th, 1907, the members of the Club, about 130 in number, were hospitably entertained at Lytchett Heath by Lord and Lady Eustace Cecil, during a meeting held in the neighbourhood, a full account of which will be found at p. lxxiii of Vol. XXIII of the Club's *Proceedings*. The chief feature of the visit was the inspection of the interesting and beautiful gardens, in which were growing a large number of curious and rare plants. The Hon. Mrs. Evelyn Cecil, the author of *A History of Gardening in England* and other works, acted as guide and pointed out and described many of the rarities.

Lord Eustace Henry Brownlow Gascoyne Cecil, born April 24th, 1834, was the third son of the second Marquis of Salisbury, and brother of the third Marquis, the Prime Minister. After passing through Harrow and Sandhurst, he was given in 1851 a commission in the 43rd Regiment of the Line by his mother's friend, the Duke of Wellington. From this he was transferred to the Coldstream Guards, with which regiment he served in the Crimea. In 1865 he left the Army with the rank of Lieut.-Colonel, and was elected M.P. for S. Essex, and later for W. Essex. From 1874-80 he held the post of Surveyor-General of the Ordnance, retiring from Parliament in 1885.

He was chairman of several Trust Companies and a director of the Great Eastern Railway. In 1873-4 he bought his estate at Lytchett Heath and built there the present house and chapel. He took an active part in County business, both as a magistrate and as an alderman of the Dorset County Council and otherwise.

In 1860 Lord Eustace married Lady Gertrude Scott, daughter of the second Earl of Eldon, by whom he had two sons, the Rt. Hon. Evelyn Cecil, M.P. for the Aston division of Birmingham, and Mr. Algernon Cecil, and a daughter, Miss Blanche Cecil. He celebrated his golden wedding on September 18th, 1910, on which occasion the Dorset Field Club presented him and Lady Eustace Cecil with a silver-gilt tazza, subscribed for by the Members. Lady Eustace predeceased him on April 30th, 1919.





Anniversary Address of the President.

By **NELSON MOORE RICHARDSON, Esq., B.A.**

(Read May, 10th, 1921.)



IN this, my seventeenth Annual Address to the Dorset Field Club, I am happy to say that the obituary roll of our members which I have to record, is one of the shortest that I have experienced, though I greatly regret their loss. Lord Digby is the oldest member, having been elected in 1889, and has always been a good friend to the Club, as our pleasant and interesting visits to Minterne testify. Of his excellent qualities and his work in other directions I will not attempt to speak, as that has been done elsewhere. The same remarks apply to the Bishop of Durham who has also passed from us and who joined our ranks in 1904. He belonged to a family of whom to one member in particular, the late Mr. Henry Moule, the Club is greatly indebted in many ways, and whose name occurs perpetually in our earlier volumes. I am glad to say that we still have the name on our list of members. Mr. Francis John Pope who joined in 1909, was a Fellow of the Royal Historical

Society and the Royal Archæological Institute. I should like also to refer to a lady, Mrs. M. E. Ratcliff who was formerly a member, having joined in 1896, and was, so long as her health permitted, a frequent attendant at our meetings. Though not actually a member of the Club, we also regret the loss of the wife of our Vice-president, Mr. Alfred Pope, one of our four surviving original members, and offer him our sympathy. Since writing the above, I have in addition to record with great regret the loss of another of our members, the Bishop of Salisbury, who passed away only a few days ago. He joined the Club in 1912, and though we have had his goodwill, his episcopal duties have prevented him from taking part in our meetings, which have of course been very few owing to the War.

ZOOLOGY.

The iron bacteria form an interesting group of small organisms and have played an important part in the formation of bog-iron ores. They collect the iron from the water in which they live, placing it in the condition of ferric hydroxide in the sheaths which form their dwellings, and sometimes cause troublesome incrustations in water pipes. A book dealing with these has lately been published, in which six species are described. A national collection of type cultures of bacteria has lately been established at the Lister Institute of Preventive Medicine and will be of great use to bacteriologists in their investigations. There are still many common diseases, probably of bacteriological origin, of which the cause is not known, such as measles, scarlet fever, mumps, &c., so that there is room for research. Experiments have shewn that flies, which often have various germs attached to them, will completely free themselves of them in a few days, probably by mechanical means. One often sees a fly cleaning itself. It has been discovered lately that the red corpuscles of the blood alter in size, being smallest the first thing in the morning and increasing to a maximum about noon and becoming larger with any violent exertion. The life history of the lobster in its

youngest stages up to about an inch in length is well-known, but between that size and four inches, specimens are extremely rare, and we have been ignorant of their habits. It is now found that they live in a burrow, which prevents their capture by the dredge. This burrow has two entrances, at either of which the young lobster can emerge in case of danger, and it is very active in its movements. An Imperial Entomological Conference was held in London last June at which many important matters were discussed, such as the immunity from attacks of certain strains of plants, the destruction of harmful insects by introducing parasites or fungi which kill them, the cotton pests, especially in Egypt, which caused a loss of £10,000,000 in 1917, and which are controlled by destroying yearly all material in the field in which the insects might survive. The experiment of destroying all big game in a district in Rhodesia is being tried as a means of preventing the deadly sleeping sickness. The tsetse fly infects the big game with the bacillus, and other tsetse flies are infected when they suck the blood of the infected animal, but the wild animal itself is not affected by the bacillus, which is so fatal to man and domestic animals. But it was not expected at the Conference that this method would be successful. I do not think that this African disease has any connection with that of a somewhat similar name, which has been given a very undue prominence lately in the newspapers. It is satisfactory to hear that a beetle, *Anomala orientalis*, the larva of which lives in the roots of the sugar cane and had been doing immense damage in Hawaii, has been nearly exterminated by a small wasp, *Scolia manila*, introduced from the Philippines, which lays its egg on the beetle grub, which is devoured by the wasp larva when it hatches. Some interesting observations on our English wasps shew that a very large number of queens are produced. From a strong nest no less than 1,118 were counted as well as 995 drones, whilst the workers bred during the season were estimated at 40,000. Each of these queens is capable of producing a new nest the next year, but hardly any are successful. The number of eggs laid by most insects is

very great, and if a good proportion reached maturity, the world would be overwhelmed by them, but fortunately they have many enemies, and the numbers keep fairly constant. Given however, propitious circumstances, this fact will easily account for the swarms which occasionally appear, and for an insect which is rare one year being common the next. The same observer noted that the tenants of a rather small nest of the common wasp, *Vespa germanica*, brought home about 2,000 flies in a day. In speaking of wasps, I should like to allude to the most interesting and, I believe, hitherto unnoticed colour sense in a solitary wasp (*Odynerus parietinus*, L.) which was observed by Major Platt of Dorchester, and which is the subject of a paper by myself contained in our last volume of *Proceedings*. The wasp showed its preference for light blue (a colour to which honey bees are partial) by choosing three reels of this colour in which to make its nests, out of about 32 reels of variously coloured cottons. For further particulars I must refer you to the paper in Vol. XLI of our *Proceedings*. From investigations carried on in the Parasitical Laboratory at Aberdeen, it would appear that the Isle of Wight Bee disease is caused by a small mite (*Tarsenemus*) which inhabits the respiratory system of the bee, where it breeds and finally stifles the bee by cutting off the air supply by its numbers. The disease had been believed to be due to a Protozoon. I referred just now to our ignorance of an early stage in the growth of the lobster. Until recent years the method in which fresh water eels were propagated was a complete mystery and there was some excuse for the ancient idea, probably still much believed, that they were developed from horsehairs. It is now known that eels live for years in fresh water, and when at length they attain maturity, they migrate to the depths of the sea and there spawn, though so far, no one has seen a spawning eel. The young ones, about a third of an inch long, in what is called the *Leptocephalus* stage, have however been met with at a depth of 2,000 fathoms. Our ignorance of even the best known fishes was much insisted on by the President of the Zoological section of the British

Association in his Address, but the actual quantities of fishes or lower animals in the sea are almost too gigantic for the mind to grasp. Recently numbers of dead sea-birds have been picked up on the Yorkshire coast with their plumage saturated with oil, and this is also believed to have injured the fish, but the origin of the oil, probably from ships, seems uncertain and the occurrence may not be of permanent importance. Some observations of flying fish would tend to shew that their flight is real like that of a bird and not merely a leap or glide. They are said to be able to turn at less than a right angle, to move their fins very fast when in flight, and to fly to such distances and heights as would not be possible on the strength of the original impulse when leaving the water. Unfortunately I have also read an account of some recent observations of the same nature, in which the observer flatly contradicts the above and states that flying fish do *not* move their fins like wings, and depend entirely for their flight on the impetus gained by the movement of the tail on leaving the water, and in the tops of any waves they may happen to touch, if their flight is low. Both observers seem to have made many observations and sound reliable, but which is right I cannot undertake to say, but positive evidence is generally better than negative and I personally incline to the flapping theory. Of course, like birds, they may sometimes glide through the air without moving their wing-like fins. A wonderful observation of the laying of the eggs of a cuckoo is recorded, in which it is stated that the observer watched the cuckoo deposit 21 eggs in different nests during a period of six weeks, one being laid on alternate afternoons. It never laid in a nest which had not already one egg, and always abstracted one of the eggs of the rightful owner. All the eggs except one were laid in the nests of meadow pipits. How the observer knew it to be the same female on different days I do not know, but I have not seen the full account. The nesting of a pair of bee-eaters is recorded from Musselburgh last June, but unfortunately the parents did not live to hatch their brood, one being captured and the other killed by a cat. Cats lead us naturally to rats, on which an

interesting pamphlet has lately been published by the British Museum (Nat. Hist.) including methods of capture. Full-grown rats are difficult to trap, but I have been very successful by my plan which I described in one of my early Addresses to our Club, of making them slightly inebriated with rum and sugar before they take the bait. - We may think ourselves in any case more fortunate than the S. Africans who are said to have 24 species of rats, one reaching the length of two feet without counting the tail. It may not however be generally realized that our common rat is about 18 inches long (including of course the tail) when full grown. The birth of a chimpanzee in the New York Zoological Gardens is only the second event of the kind that has taken place in confinement, the other being at Cuba in 1915. The baby weighed 3lbs. and was 16in. long but only lived a few days. The protection of the fur seals of Alaska for five years has had most satisfactory results, the seals having greatly increased in numbers, whereas many fur animals are threatened with extermination. The mammalian fauna in Australia suffers much from foxes, from the poisoning of rabbits, from cats, and from bush fires and other causes which are reducing it very seriously and are perhaps more difficult to control than even fur hunters. On the other hand efforts are being made to set apart as a reservation for preserving the fauna, the Okefinoke swamp in Georgia, covering 700 square miles, in which the animals are suffering from the effects of drainage and cultivation. Something may perhaps be said on the utilitarian side, but probably this swamp which appears to be in many respects of unique character, could be spared for at least a few generations.

BOTANY AND AGRICULTURE.

A novel and very useful and interesting exhibition was held in London last summer of many hundreds of different kinds of wood from various parts of the British Empire, many being practically unknown in this country and of great value for their strength, permanence, beauty or other qualities. Even Indian woods seem little known or used here and African still less,

but it is hoped that this will be somewhat remedied by this exhibition. The same wood varies so much in appearance in different trees or different parts of the tree especially if of an ornamental nature, and also according to the direction in which it is cut, that it is often very difficult to identify even in our more familiar woods, but probably the qualities remain more or less constant. Besides this there are sometimes several distinct species which go under the same name, such as satin-wood and mahogany, of which last there were some beautiful specimens from Africa. Attempts have been made to grow camphor in various British dependencies, with success in some cases, especially in Trinidad. Cotton also and sugar-cane cultivation are receiving special attention, and good varieties are being raised in Government establishments for distribution. Jerusalem Artichoke tubers are recommended as a source of sugar in this country, and it has been also suggested that alcohol, at least for other purposes than drinking, might be obtained from various plants which occur in abundance, such as couch and other grasses, bracken, &c., as well as the cabbage stalks which are now thrown away in great masses. Experiments with wheat weevils (*Calandra*) tend to shew that air-tight storage is successful in destroying this pest, but the practical difficulties of making a large granary really air-tight are great. I have had a little experience during the war of the extremely destructive powers of these insects, which increase very fast and in the autumn wander in search of places in which to hibernate, and turn up in all sorts of unexpected positions, at considerable distances from their food. It is said that the rate of increase may be as high as 700-fold in 16 weeks, which accounts for their ravages. I believe that they are found in all parts of the world wherever wheat is stored. This "air-tight storage" is probably what the makers of underground covered granaries aimed at, and corn has been found in some of the den holes which have been discovered at Portland and which are well illustrated in "Damon's geology." The most recent experiments on the electrification of seeds do not shew any special effect of this process in most cases. A machine called the Crescograph

has been devised for measuring the growth of plants, and consists of a lever with a long and short arm, the latter being attached to the shoot, whose growth is much magnified by the movement of the end of the long arm. The effect of various treatments of the plant on its growth can in this way be noted. It is generally considered that light is necessary for the development of chlorophyll, the green colouring matter of plants, but an alga (*Scenedesmus acutus*), which has been cultivated in the dark for eight years, is as green as others grown in the light, shewing that light is not always necessary. We have been accustomed to look upon the common ragwort (*Senecio jacobaea*) as a troublesome weed but harmless. In Nova Scotia however it appears to be poisonous to cattle and to give rise to a disease of the liver, and another species in S. Africa produces similar effects. I have seen this plant growing in rough pastures in such masses that one would hardly expect any cattle to survive if it were really poisonous in this country. It is fortunately not one of the most difficult weeds to exterminate. One of the most destructive plant pests is the prickly pear in Australia, where it is said to cover 1,000,000 acres of fresh land every year and no satisfactory cure has yet been found. The wart disease in potatoes was first noticed in 1878, but has now spread over a considerable portion of this country. Fortunately some varieties are immune and these should be grown. In this connection it is interesting to note that the Potato was first tasted by Europeans in 1519, in Brazil, by Magellan, who sailed from Spain and stayed there for some months. One wonders what these potatoes were like. The first picture of the potato plant is found in the first edition of Gerarde's *Herbal*, 1597, and the tubers look rather small and would probably now be much despised. I exhibited a copy of this book to the Club some time ago.

GEOLOGY.

The knowledge of the earliest fossil plants has made considerable strides in recent years owing chiefly to the discovery of well preserved specimens in the early Devonian rocks at

Rhynie in Aberdeenshire and Sweden, especially the former, where the fossils are preserved in chert and their structure can be well seen. Some of these plants are without leaves or roots and spring from rhizomes, whereas others have leaves of a simple type with cylindrical stems bearing sporangia. Their nearest living allies (*Psilotaceæ*) seem to grow in much the same way and have appendages about which it appears to be still undecided whether they are to be classed as leaves or branches. It is also only lately that much light has been thrown on the fossil insects of the coal measures, of which about 40 or four-fifths of the whole number known to science, have been discovered or identified in the last few years. Impressions of moths' wings have been recently found in numbers in the stalagmite in a cave at Cheddar, most probably from wings dropped by bats, but I do not suppose that these would be very ancient. The larger portion of a skeleton of the giant marsupial *Nototherium* has been found in Tasmania. It is believed to have had a horn on the nose, like a rhinoceros. One of my Australian friends has sent me an elaborate account, published by the Queensland Museum, of an extraordinary animal (*Euryzygoma dunense*) of which a fine fossil head was found on Darling Downs. This head is about 25 inches in length by 27 inches in width, with very large processes at the sides, which are supposed to have formed huge cheek pouches. Little seems known about the rest of its body, but this immense marsupial mammal must have had a very grotesque appearance. It seems to be allied to *Nototherium* just mentioned. Remains of *Ursus spelæus*, the cave bear, excavated from the caves of Equi, Italy, were found to be much affected by tuberculosis, which it is suggested may have conduced to its extinction. I am not aware whether this disease has before been noticed in fossil animals. What it is hoped may be a very valuable and useful find has been made in N.W. Canada, where an oilfield has been discovered which promises to be of great extent and to afford a large yield, but knowing the proverbial uncertainty of such things, we must not be too

sanguine. On the drill reaching a depth of 800 feet, the oil gushed out in a column 15 feet high. Its source is stated to be a thick deposit of black bituminous shales and limestones, which cover an area of enormous extent. A huge mass of rock, shewn by the arrangement of its fossils to have been inverted, it is assumed by ice action, has been detected at Shenley near Leighton Buzzard. It consists of Gault and Cenomanian strata and is 250 yards long by 150 wide. There seem to have been more notable earthquakes than usual in the past 12 months including one at Milan on September 7th, being the most violent ever known there and causing great destruction over a considerable area. Another destructive earthquake occurred in the isthmus of Tehuantepec on the Gulf of Mexico on February 4th last. On December 16th the seismographs in this country and elsewhere indicated that a great earthquake was taking place in some part of the world. Considerable speculation ensued as to the locality, which was doubtless N.W. China, as a very severe earthquake, affecting an unusually large area, was afterwards reported to have taken place there on that day. On September 10th a slight earthquake occurred on Exmoor, but no damage was done beyond the fall of a chimney. Perceptible earthquakes are however so unusual in this country that I think it worthy of record.

ASTRONOMY.

Einstein's theory of Relativity about which I endeavoured to say something in my last address, continues to interest the astronomical mind, but can hardly perhaps yet be looked upon as thoroughly accepted. The third test that I mentioned, namely the slight differences which should according to the theory, occur in the position of lines in the spectrum, between those in light proceeding from the sun and similar light produced on the earth, do occur, but the differences are not what they ought to be according to Einstein's calculations, and they seem moreover to vary according to the part of the sun from which the light is taken, suggesting that there is some other

cause at work. It is proposed to again observe the second test, that of the bending of the ray of light from a star passing close to the sun, at an eclipse of the sun which will take place on September 20th, 1922. The rare event of an annular eclipse of the sun visible in the British Isles occurred on April 8th last, but as the annularity was complete only in the more northern parts of Scotland, I fear that it was not seen by many from this county. The sky was fortunately clear and the eclipse was well observed, I believe, everywhere. The temperature fell as much as 9° and the colour of the sky was a curious leaden hue, elsewhere described as purplish. On January 24th, 1925, there will be a total eclipse of the sun in which the track of totality will just graze the Western Hebrides, but on June 29th, 1927 a total eclipse will occur which will be visible from St. David's Head to Whitby. As the next British one will not take place until 1999, we had better take advantage of this opportunity. Many new minor planets have been discovered of late years, chiefly by the aid of photography, two plates taken of the same portion of the sky shewing the movement in the interval of any planet included. A much brighter one than usual was discovered in January, 1920, and given the name of Alphonsina by a Spanish Astronomer. Another, believed to be a planet, has a cometary orbit, but no nebulosity has been observed in it. The Lyrid meteors appeared about April 21st, 1920, in fair numbers, and the show of Taurid meteors in the first few days of November was exceptionally good, but the November Leonid meteors, about November 14th, celebrated from the magnificent shower in 1866, of which I had the good fortune to be a witness, were few in number. There is some reason to believe that a shower of meteors which was observed on June 28th, 1916, is connected with the Pons-Winnecke comet which is now faintly visible, and that, as this comet will on this visit pass nearer to the earth than on the last occasion, we may have a more brilliant shower about June 27th next. Some fine meteors were seen on March 1st and 2nd, at Bristol and elsewhere. A splendid detonating fireball was observed on March 16th,

and others on March 25th and 29th. Meteorites, or meteors which reach the surface of the earth without being dissipated by their combustion, have a rather romantic interest, as rare objects coming to us from outside our world, though they do not, I think, contain any substances that are not found on the earth. One which fell in Kentucky on April 9th, 1919, is described as "a meteoric breccia, composed of fragments of two quite dissimilar stones," and it is stated to be so different in character from most meteorites, that unless it had been seen to fall, its meteoric origin would not have been suspected. A new star was discovered in the constellation Cygnus on August 20th last and was afterwards observed on a photographic plate taken on August 16th, though it was absent from one on August 9th. It very quickly reached its maximum brightness of the 2nd magnitude on August 24th, and then quickly declined, being below the 4th magnitude by the end of the month, and the 8th by the end of September. There was nothing unusual about its spectrum. It is now possible to measure the distances apart of the two components of double stars with great accuracy by a device called an interferometer, in which the light passes through two movable slits on to the reflector, which adds much to our knowledge of their relative movements. It has also been found that many of the brightest stars are in a very gaseous condition and consequently of large dimensions. These have been called giant stars, and the denser and smaller ones, dwarfs. The diameter of Betelgeux, one of the brightest stars in Orion, has been calculated to be 260,000,000 miles or about 300 times that of the sun, but this being the first calculation of this sort must probably be received with some reserve, though the strides in astronomical instruments, methods and knowledge have been immense of late years. In contrast to this I may mention two early Chinese equatorial telescopes constructed in 1279, which were taken by the Germans in 1901, and have, with other early instruments, now been restored to the Chinese. Pictures of these two equatorials are given in Yule's book on Marco Polo, who was in China when they were erected nearly 650 years ago.

METEOROLOGY.

It would appear from old records that the freezing of the Thames was a much commoner event in the seventeenth century than in modern times, as Evelyn records no less than seven such freezings in his diary which extends from 1620 to 1706, and Pepys, 1660-1669, also records three which are not mentioned by Evelyn. The Thames was also probably frozen in 1657-8 which was a very cold winter, which makes eleven in 84 years or rather more than one in 8 years, which is certainly not the case now. This would suggest that our winters are less severe on an average than 250 years ago and the last very mild winter would perhaps have occasioned surprise to the people of that time. The period from December 21st—January 10th was warmer than in any year for the past 80 years, and the mean temperature about 10° above the normal. It is stated that the weather for October and November, 1919, was the coldest for 80 years, whilst that for December, 1919, to April, 1920, was the warmest for 80 years. Last October was exceptionally warm. So that the weather lately has been curiously uncertain. Last summer was a particularly cool one, about 2° cooler than the normal. The Meteorological Report of the British Antarctic Expedition of 1910—13 has lately been published. The violence of the wind seems to have been very much less than that experienced by the Mawson Expedition at a more westerly station. On May 29th, 1920, a dreadful disaster took place at Louth, the small stream which passes through the town suddenly swelling into a huge flood, rising 15 feet in half-an-hour and carrying away everything, including buildings, in its course. This was caused by a very heavy thunderstorm which fell in that part of Lincolnshire to the extent of about five inches in about two hours and not apparently by any waterspout, though the resemblance to some such phenomenon was noted by at least one observer. The height of a brilliant aurora seen in Norway, on March 22nd, 1920, was measured and found to be about 300 miles. The distances at which gunfire was heard caused

much interest during the war, but the transmission of the sound was generally looked upon as taking place through the air. It has however been found that these sounds are transmitted very clearly through the earth and often audible in gravel pits or other excavations, or by putting the ear to the ground, when they cannot otherwise be heard.

ELECTRICITY.

At the annual visitation of Greenwich observatory at which many astronomers and others were present, on June 5th last, it was stated that the mean magnetic declination for 1919 was $14^{\circ} 18.2'$ and that it is decreasing about $9.6'$ annually so that it should reach zero about the end of the century. One of the most remarkable inventions in connection with wireless telegraphy is that of a machine which automatically prints off the message received in ordinary type. A perforated strip in the Morse code is first produced which is used as a guide for the printing of the letters in ordinary type. By means of a telephone receiver with a trumpet attachment, wireless messages can be heard by a large audience, and developments in wireless telephony continue. Arrangements have been made for the diffusion of astronomical information from Nauen in Denmark, so that cases in which immediate observation is desired in different countries, may not be delayed. Longitude can be also very accurately determined in this way, as at Adelaide, Australia, where signals from Lyons can be received, and where the accepted longitude has been slightly corrected by these means. A valuable recent invention for navigating purposes is a submarine cable laid in the track along which a ship has to pass in entering a harbour. An alternating current is sent through the cable, and wire coils are placed on each side of the ship and connected with two telephones on the bridge. When the sounds in each telephone are of equal intensity the ship is over the cable, and if they become unequal the course can be adjusted until equality is restored. A cable of this sort has been laid at Portsmouth, with satisfactory results. Experiments have been carried out to a depth of 30 fathoms, but it will probably be effective at greater depths.

CHEMISTRY.

A good deal of experimental work has lately been done in connection with the structure of the atom and similar subjects, but the exceedingly small size of the objects dealt with makes the experiments very delicate and the results perhaps rather theoretical. The sort of size of the constituent parts of the atom, which is supposed to be made up of hydrogen atoms and electrons, is a fraction of an inch represented by unity as the numerator and a number of about 17 figures as the denominator, a smallness immensely beyond the power of the strongest microscope. The basis of these experiments is the observation of the particles thrown off by radium and their movements in connection with other particles. The α particles which proceed from radium are the nuclei of atoms of helium, the β particles being electrons. It is now reported that the Chilian supply of nitrate of soda upon which we have hitherto relied for the nitrates we required, is not nearly exhausted as stated, but sufficient for 200 years, which fact if confirmed may prevent the development of methods of nitrate production which are carried out in some countries where much more water power is available for the purpose than in Great Britain. This would be a disadvantage, as it is most desirable that we should be self-supporting in all important things, as far as possible. The passing of the Dye stuffs bill will it is hoped give an impetus to the manufacture of dyes in this country. An agent greatly used during the war for sterilising water, was chloride of lime. I have used this for many years for destroying the small crustaceans and insect larvæ which are often so abundant in rain water. The former are killed by a small dose, the latter require a considerably stronger one.

ENGINEERING.

One of the most wonderful inventions that has lately come into notice is the optophone, an instrument by means of which the blind are enabled to read ordinary print. In this, by the use of selenium cells, different sounds are produced by different

letters, the eye of the instrument being directed to one letter at a time, and the blind can be trained to recognise these sounds and form them into words, which were read by a blind operator at a rate of about 25 a minute. At the National Physical Laboratory tests are now made of the resistance to shock and fatigue of materials, as well the tests for tension and strain, as the strongest materials are not always those that will last best when the strain is long continued. Measurements are also made to a millionth of an inch. The British Scientific Instrument Research Association, formed in 1918, has carried out many important investigations and produced various things and methods which were much wanted, such as improvements in glass polishing, solders for aluminium and cements. Another useful invention is for de-sensitizing photographic plates, so that the extremely sensitive ones can be developed with more light. A very rapid X-ray plate has also been produced and a kinematograph projector with a rotating ring of mirrors, which is said to prevent the flickering caused by the shutter. It is found that a good deal can be learnt about the bottom of the sea from photographs taken from aeroplanes, which shew to a certain extent its features. In view of the great increase in the cost of coal, power derived from other sources is much under consideration, especially perhaps tidal power, and an elaborate scheme for utilizing the high tides of the Severn has been proposed. The variable heights of tides are one difficulty, but the power is there, and it is chiefly a question of the primary expense in developing it. The inland water power of this country is also considerable, though very inferior to that of Norway and elsewhere. The pressure wave in water resulting from an explosion is found to travel at practically the same rate as the sound wave in water, 4,900 feet per second. Oil is being more used in ships instead of coal and the extraction of oil from coal at the pit's mouth has been proposed. By the use of fuel oil on a large ship, the *Aquitania*, the stokehold staff was reduced from 350 to 84 men, and there are also great economies in loading, three men being required for six hours instead of 50 for 108, as well as in weights and

storage. Another possible source of power is alcohol, but a satisfactory way of producing it in this country has yet to be found. A Smoke abatement Committee has been appointed by the Ministry of Health with a view to reducing the smoke nuisance in our large manufacturing towns. A method of building cottages formerly in use, called *pisé-de-terre*, was by ramming nearly dry earth between shutters to form a wall. I have seen garden walls in Dorset which appear to be made by this method and when thatched to last well, and with the price of cottages at its present height, this cheaper method might be adopted with advantage. One of the largest buildings yet made of steel electrically welded has been erected and measures 27 by 50 feet. In America ships have now for some little time been fabricated from separate parts, manufactured by different firms. These have shewn themselves very seaworthy, and any damages are repaired by the introduction of a new standard part in a fraction of the time which would otherwise be required. The raising and repairing of an Italian battleship sunk in six fathoms of water by an explosion, which made an enormous rent, has been successfully carried out, the ship being floated by compressed air, upside down, towed to a dry dock, repaired, and afterwards righted at sea. The rent covered more than 500 square feet. The increase of the population in Egypt and the increased cultivation have made increased irrigation necessary, for which a scheme is proposed involving two immense dams on the Nile, one being near Khartoum and having a length of more than four miles. Some experiments with balloons have shewn that the most visible colour for pilot balloons is red if white clouds are present, but white if the sky is blue. The mean rate of ascent was 530 feet per minute, but the rate varied a good deal under different conditions. Experiments have also been made with aviators by placing them in a large tank of cold rarified air, corresponding to different heights, and observing its effect. Different men can stand different amounts of cold and rarefaction, but about 19,000 feet appears to be the limit and oxygen becomes necessary at about 12,000 feet. However, the record height

attained by an aeroplane is now given as 10,979 metres, which is not far from double the experimental result. In this connection it may be interesting to mention that the greatest depth reached by boring is in Silesia and amounts to 7,350 feet.

GEOGRAPHY.

One important result of the war has been a great deal of alteration in the political geography of Europe, into the details of which I do not propose to enter, as it hardly comes within the limits of either Natural History or Archæology. Though the world may be considered now to be well known compared with what it was 50 years ago, such remote and difficult spots as the N. and S. Poles even having been reached, there seems at present to be no lack of enthusiasm for expeditions of exploration. Amundsen is proposing a five years drift in the ice in the Arctic circle, having been for some time cruising there for that purpose. An expedition has been organized at Oxford to visit Spitzbergen this summer to investigate its ornithology, botany and palæontology, and to ascend some of the unscaled peaks. A Danish Arctic expedition is also in progress. It was found by the Canadian Arctic expedition (1913-18) that the tides in that region were generally less than 1ft. and rarely $1\frac{1}{2}$ ft. At the head of the Amundsen gulf the tide occasionally rose 2ft. A British expedition has gone to survey certain unexplored regions in the Antarctic circle, and on its return, it is intended to develop a still more elaborate one in which a large aeroplane will take part. Preparations are being made for an attempt to ascend Mount Everest, but I cannot imagine that this will be more than very partially accomplished. With help from the Chinese, the American Museum of Natural History is sending out an expedition to work out the fauna and flora, including I believe palæontology, of the interior of China, Central Asia, Manchuria and Kamchatka, about which very little appears to be known. The results of a similar expedition from the same museum, which spent more than six years in the Congo and returned in 1915 with 120,000 Zoological specimens, besides those in other branches,

are to be published shortly. An Orinoco expedition has lately returned with valuable geographical and meteorological information amongst other results. The organization of an ocean expedition like that of the Challenger, has been much urged, but I fear that the present is considered an unsuitable time and that lack of funds will prevent it from being carried out. A new edition of the 1in. and $\frac{1}{4}$ in. to the mile Ordnance Survey Maps is being issued and a good deal of colour is used, which will bring into prominence the contours and different features such as rivers, woods, &c. The roads are divided into no less than ten categories, the main roads being coloured red. It is an unfortunate fact that deserts in several parts of the continents of America, Asia, Europe and Africa, are spreading. It is believed that they have been caused, in at least some cases, by alterations in the courses of rivers, and that it would be possible at all events in S. Africa to divert these rivers into their old courses and improve an area of more than 1,000,000 square miles. When the need of more food for the earth's growing population becomes more pressing this matter will perhaps be seriously taken in hand.

ARCHÆOLOGY AND ANTHROPOLOGY.

By the liberality of the Prince of Monaco, who has already done much for several other branches of science, an Institute of Human Palæontology has been opened in Paris for the study of all problems relating to the origin and development of man. In the New York Museum, five large halls are devoted to the different geological types, from Invertebrates, through Fishes, Reptiles and the lower Mammals, to the Hall of the Age of Man, where Palæolithic man is represented in four large Mural paintings, with mammoths, woolly rhinoceroses and other animals amongst which he lived. These are founded chiefly on cave paintings in France and Spain, and human and other remains of that early period. Besides these, hypothetical reproductions of the various types of early man and his nearest allies, such as Pithecanthropus, have been made, and even one of Neanderthal man is attempted, though this

especially must be to a great extent theoretical. The Mackie Ethnological expedition to Central Africa has just finished its labours and brought back much information about the ceremonial and religious observances of the different tribes, most of whom have as yet been little influenced by civilization. The work of the Indian linguistic survey is also progressing, 179 languages and 544 dialects having been so far dealt with, an immense number for only one country. Investigations amongst the cliff dwellings of the Pueblos in Colorado tend to shew that they are not derived from either the Mexicans or the Aztecs, and, as no trace of European objects has been found, they were doubtless anterior at least to Columbus. A series of rock inscriptions relating to the early history of this race, and mentioned by the first Spanish explorers, have been transcribed. Tracings of prehistoric rock engravings from the shores of Lake Onega, N. Russia, have been made, this being the only place in Western Russia where they occur. A book on the ancient Maya civilization in Honduras and Guatemala, has been published, dealing with the inscriptions and fine ruins. These people who were before the Aztecs, had an elaborate hieroglyphic script and their inscriptions chiefly relate to matters connected with the calendar; the others, which are probably religious, seem to be harder to decipher. Numerous excavations have been made in different places. Those at Motya, Sicily, shew an ancient Phœnician colony, which came to an end in 397 B.C. Here have been found a number of urns containing cremated remains of animals, mostly ruminants. No human remains were found in this animal cemetery. In Crete, in a Minoan palace have been found a series of colossal bronze double axes, some being several feet in length. From a cave in the Mendips have been unearthed objects of worked bone and stone, bronze hubs and bands of chariot wheels, bronze bracelets and rings, an iron key, iron slave shackles, and pottery, which had affinities with that found in Brittany. It is supposed that the occupants belonged to the race who built the Lake village at Glastonbury and inhabited Wookey Hole and other neighbouring places. Further work at

Stonehenge has shewn the existence of an earlier megalithic monument on the same site, and suggests a later date for the present circle than had been attributed to it. An enlargement of a mortise in the underside of one of the lintel stones which is believed to have been made after the stone was elevated, owing to a mistake in measurement, to cause it to fit the tenon on the upright stones, suggests, if this theory is correct, that there must have been something in the nature of a primitive crane with ropes to raise the lintel. But the evidence seems rather uncertain. In Kent's Hole, Torquay, a Palæolithic bone implement has been found which appears to be for use as a needle for sewing skins, and to be so far unique as regards that period, but possibly others may exist elsewhere in collections. A curious mould in red sandstone, both pieces of which are preserved, has been found at the Worm's Head near Swansea. The objects which could be moulded are four rings of different patterns. A gold disc with extremely fine work and other gold objects have been discovered in a bog in Co. Cavan, and are now in the National Irish Collection. At Graig-lwid, Penmaenmaur, a Neolithic stone axe factory has been discovered which appears to have done a large trade. Very fine series of specimens illustrating the manufacture have been obtained. A large factory of eoliths made by natural agency, by means of subsoil pressure, has been found to exist beneath the Thanet sand in the Bullhead bed at Grays and it is said that the process can be traced out by careful examination of the eolith in situ. Sometimes even more formed implements occur, and if found away from their bed would it is said be apt to deceive experts. The valuable Egyptian collection at Manchester University has lately benefited by a bequest of £30,000. Very large sums are often given in America for scientific purposes but comparatively rarely in this country. It would seem that Aerial photographs are likely to be of much use to the Archæologist, as in some cases at all events they give a meaning and a plan to what looks on the earth a meaningless medley of mounds and hollows. This is strikingly exemplified in a photograph of the ancient site of

Samarra in Syria which produces a definite plan of the town out of apparently formless heaps.

GENERAL.

There are two subjects which are by tacit consent supposed to be excluded from the deliberations of our Club and of similar institutions, namely Politics and Religion. And I would not have touched on the latter to-day, except that it seemed desirable to express the feeling of disapprobation, in which I believe I shall find around me many sympathizers, at the official sermon preached to the British Association at Cardiff last August by Canon Barnes, F.R.S. This dealt chiefly with evolution, which, although he admitted it to be no more than a theory, (though he elsewhere derived all life from "some fundamental stuff in the universe" from which electrons, the next stage, arose,) he dealt with as quite superseding any parts of the Bible which seemed to be opposed to it.

Some of his words are "Evolution was, and still is, not an observed fact, but a very probable theory." "In our own times the leaders of Christian thought have, with substantial unanimity, accepted the conclusion that biological evolution is a fact; man is descended from the lower animals." "The time has come when we must not try to evade any implications of the theory of natural evolution. We must, not silently, but explicitly, abandon religious dogmas which it overthrows."

There is much of the Bible that we cannot fully understand, but that seems to me no reason for supplanting these parts by a theory which though apparently supported by many observed facts, is absolutely unknown to us as regards its methods of working. It is the fashion to-day for everyone to pick out parts of the Bible which for some reason they object to, and either deny or ignore them. I will not enter further into this matter, but, as it caused much discussion at the time, I thought it well to allude to it as a protest against its repetition here or elsewhere. I do not mean by this to say that I do not believe in the existence of any evolution in nature, for I think that it,

or, as I prefer to say, Natural Selection, has probably played and is playing a part in the development of the animal and vegetable life on our globe, but our ignorance on the subject is great. Even if the theory of evolution is carried back to its extreme limits, it must have had something to work upon, and that something must either have existed eternally or been created. But where creation ended and evolution began, it is, and probably always will be, impossible for any man to tell. The subject of Psychology has increased of late years to such an extent at the British Association that a new section has been constituted to deal with it. In spite of the admission of women, in so many cases, to positions until recently open only to the male sex, Cambridge has had the hardihood to deny them an equal share of the rights of the University which it was proposed to allot to them ! An interesting Scientific Exhibition was held at Olympia recently under the auspices of the Daily Mail, at which many new and other processes and instruments were shewn, especially perhaps in matters connected with electricity. A report recently issued on American Museums shews some differences from our methods, especially perhaps in the fact that the Americans carry out more in the way of explorations than ourselves, the National Museum having for instance at present an exploring party in Africa. But this is rendered possible by the large bequests and other gifts which they receive, which are comparatively small and rare in this country. In Australia it has been decided to set apart reservations for the preservations of the aborigines, who are steadily decreasing. At the same time doleful prophecies are being made about the future overstocked condition of the earth by more civilized white nations who are said to be increasing at a rate of something like 1 per cent. per annum. There does not seem even at present to be a great superabundance of food available and if the population were doubled in, say, 100 years, it is doubtful how they would manage to exist. It is however our remote decendants who will have to solve this momentous question, and who knows what discoveries may be made in the next century ! In conclusion I would

offer our congratulations to our two Vice-Presidents, the Rev. Canon Mayo, one of our four surviving original members who helped to found the Club in 1875, who has just taken the very important degree of D. Litt. at Oxford, and to Mr. William De Courcy Prideaux, who has received from the French Government the Order of Chevalier de l'Etoile noire for his valuable inventions in machine gun belting during the war.





Notes on a few of the Insects and Plants at Portland.

By NELSON MOORE RICHARDSON, Esq., B.A.

(Read at Portland, July 6th, 1920.)

IT would of course be impossible on this occasion to give more than a few fragmentary notes on the the insects and plants found in this most interesting and, in many respects, unique locality; and for full lists, so far as the plants are concerned, I must refer those who wish for further information to a paper by the late Mr. W. Bowles Barrett in Vol. XXXIII of our *Proceedings*, and for the butterflies and moths to "A List of Portland Lepidoptera" in Vol. XVII by myself, and several other papers which I have written on this subject in other volumes. My own knowledge of plants being principally of those which form the food of various caterpillars, I shall deal chiefly with them in this connection; but I will first mention a few of the rarer species. *Limonium recurvum*, C. E. Salmon, the Recurved Sea Lavender, has not been

identified with certainty from any other part of the world, but as the botanists have taken 60 years to decide that it is a distinct species, and as it occurs here with a variable allied species, *L. binervosum*, I feel that the next generation of botanists may reverse this decision! The other specially rare plants given by Mr. Barrett are *Polycarpon tetraphyllum*, *Sedum rupestre*, var. *minus*, *Valerianella eriocarpa*, *V. dentata*, var. *mixta*, *Hieracium platyphyllum*, and *Muscari racemosum*. One or both of these species of *Limonium* forms the food plant of a plume moth *Agdistes bennetii* which used to be common at a spot at the end of this undercliff, but lower down by the sea and reached by a very steep and somewhat perilous descent. This is now, alas, destroyed, like the great Neolithic burial ground, many dene-holes and other things of great interest, by quarrying. But when Mrs. Richardson and I used to spend about two nights a week here, during the summer and autumn, collecting moths, from 1886 to about 1900, this end of the undercliff was comparatively untouched, and a splendid place for many rare species. Here we first took *Epischmia banksiella*, Richardson, a species new to science in 1887; and at the bottom of this perilous descent, six years afterwards, she discovered the larva on that beautiful plant *Inula crithmoides*, Golden samphire, common along the cliffs by the sea. In 1894 she also found two larvæ on this plant which produced the very rare *Plusia ni*. They closely resembled the larvæ of the very common Silver Y moth (*Plusia gamma*), and I urged her not to keep them, but she insisted, with this grand result! At the same place occurred *Acidalia rusticata*, a local species, and a relative of the well-known Portland wave (*Acidalia degeneraria*), which is not uncommon under the prison, and can be beaten out of bushes in the day time, when it generally flies a little way and then flops down on the ground with its wings spread. It occurs nowhere else in England. *Tinea subtilella*, a very small dark cream-coloured moth, is also confined to Portland as far as this country is concerned, and was discovered by Mrs. Richardson near here. We hunted in vain for the unknown larva, much worse than a needle in a bundle of hay, as there was no

clue to the food, and I eventually found some small unknown Lepidopterous cases under stones, constructed of silk and the microscopic lichen on which the larva feeds—they are by no means common—and we naturally assumed that they were this species. However, after three years we bred some moths, black with silver markings, which turned out to be new to science, and which Lord Walsingham did me the honour to name after me, *Tinea richardsoni*. Both this and *E. bankesiella* were afterwards found on the Swanage coast by Mr. Eustace Banks, after whom I had named the latter species; and I have also found this at Lulworth. A variety of the common *Scoparia mercurella*, named var. *Portlandica*, was formerly regarded, like many other forms now proved to be varieties only, as a species, *S. phæoleuca*. It is a little grey moth which sits on the rocks and is rather hard to see until it flies off. It differs from the common mainland form in having a broad white band; but intermediate forms occur here commonly. A great rarity, *Diasemia ramburialis*, the only Portland specimen, was taken here on July 11th, 1889, under the Verne by the late Rev. C. R. Digby. He and I and Mr. Banks had just reached our collecting ground when he stooped down and picked a four-leaved clover and said "Hullo, here's luck for me!" Within half-an-hour he took this rarity! Evidently the first thing for us to do to-day is to find a four-leaved clover! The wormwood (*Artemisia absinthium*), which grows so abundantly in the disused quarries on top of Portland, affords food for three moths, as well as for hosts of snails. The larva of *Cucullia absinthii*, the wormwood shark, feeds on the flowers and is difficult to see, owing to its close resemblance to them. It is a great cannibal when kept in confinement. Another feeds in the stems (*Ephestia cinerosella*), and a third very beautiful little moth (*Catoptria pupillana*) in and close to the roots. A few flowers, such as crowfoot trefoil, the kidney vetch (*Anthyllis vulneraria*), thyme, milkwort, squinancy-wort, and others occur in great masses and form beautiful floral carpets; others larger and more imposing, as *Echium vulgare* (*Viper's bugloss*) are splendid in some seasons when they

appear in quantities in certain spots; and on a good night when the *Echium* and wild sage, which we found quite the most attractive plants, were covered with moths sucking honey, including many rare ones, especially some of the genus *Agrotis*, the sight was one that an entomologist would not easily forget. No less than 17 of this genus are included in my list, the scarce *A. pyrophila* (*simulans*) being not uncommon in some seasons on these two flowers. They also came more or less to sugar, which we sometimes put on flower-heads, with the exception of *Agrotis lucerneae*, which disdained such coarse fare. It and *A. lunigera* were fairly common. In the bramble bushes on the West Cliff is found a rather scarce smallish spotted grey moth, of an exceedingly wild and active nature, *Eupithecia constrictata*, the wild thyme pug, which feeds on thyme. You stand on a shaky stone with net erect, and lightly beat the bramble bush with a stick. It rushes out, flying in all directions alternately, and you aim at it and generally catch a bramble and get a great hole in your net, if you do not over-balance and fall headlong into the brambles, as I once saw a friend do, much, I regret to say, to the delight of his youthful son! Indeed the person who named it the "wild thyme" pug was not mistaken, as it certainly does give one the "wildest time" of any Portland moth in my experience. Perhaps the most exciting form of collecting here is with a big lamp (acetylene was not in common use, so I had a paraffin lamp enclosed like a street lamp) in the autumn. On a good night, numbers of moths, nearly all *Noctuae* and males, keep on flying to it and flutter up and down the glass, including *Heliophobus hispidus*, one of the well-known Portland moths, which used to be considered rare when people searched carefully for it by day amongst the grass and stones, *Epunda lichenea*, a light form, a beautiful form of *Aporophyla australis* and other species. At ivy bloom also we used to get some, but light was by far the most productive. The females of *H. hispidus*, &c., could be found crawling up grass stems, but hardly ever came to

light. Thirteen other plume moths with their beautifully divided wings like feathers occur here, but no very rare ones. There is a little moth with a purplish black gloss (*Psychoides verhuellella*), of which the larva feeds in the leaves, but generally in the sori of the hart's tongue fern. Speaking of ferns, the true maidenhair fern used to be found as lately as 1877, in crevices of the cliffs, but is now believed to be extinct owing to quarrying. It may however linger somewhere. I have found *Asplenium marinum* in recesses of rocks close to the sea. Madder (*Rubia peregrina*) grows abundantly on the west undercliff and to a less extent on the east side, and produces *Botrys asinalis*. The bee orchis is sometimes common in the west quarries, and borage, hounds-tongue, mullein, vervain, marjoram, golden rod, samphire, carline and other thistles, wild carrot, Portland and other spurges, are all common on the East Weare or undercliff, and mostly interesting entomologically. *Sambucus ebulus* (Danes blood) grows in masses a little further on, and there is a quantity of fennel, probably an escape from cultivation close by. If time permits, which is not generally the case, the miniature undercliff on which it grows, and which starts a few hundred yards beyond the end of this one, is worth seeing. It begins just beyond the engine-house, if that institution has survived the universal quarrying. I will end by mentioning a very minute but beautiful and rare moth (*Nepticula centifoliella*) the larva of which mines into the leaves of the sweet briar (*Rosa micrantha*), bushes of which grow abundantly on the undercliff North of Pennsylvania. When the larva is full fed, it comes out of the leaf and spins its cocoon in the axil of the leaf, which is therefore easily found. The common species of this genus, which feeds on garden and wild roses almost everywhere, I have never found on these bushes, nor has *N. centifoliella* occurred elsewhere in Dorset. If anyone desires further information about the plants or moths, I have a copy of Mr. Barrett's and my own lists which he can study. To

make you cautious I may mention that Portland has always had a bad reputation amongst entomologists (not altogether unfounded) for the dangerous nature of its collecting ground, as well as its fogs, and this, with a story of an entomologist who fell down and "bruised his liver," did much to deter collectors, especially from night work, so that little had been done except in the day-time. We, however, never met with an accident, though some of the places we went to certainly rather invited such a result!





Eggardun Hill.

By The Rev. H. SHAEN SOLLY, M.A.

(Read 12th August, 1920.)



EGGARDUN Hill* is a spur at the western extremity of the chalk plateau which stretches across the South of England. Only a few outliers, such as Beer Head, represent a further western extension of the chalk. At the base of this formation is the chloritic marl, highly fossiliferous, and then comes the greensand forming the summits of the ring of hills that can be seen surrounding the heights and valleys of Jurassic beds. Eggardun, from which the scene may be surveyed, is itself 800 feet above sea level, and the steepness of the escarpment admirably adapted it for the site of a promontory fort. Two such forts have evidently been made here. The first is represented by an entrenchment which crosses the spur from side to side and formed a comparatively small camp at the western end of the spur. Here much wastage of the chalk

* *Proceedings*, Vol. XX, pp. 174-178.

has taken place, and there were probably lateral ramparts which have disappeared down the slope. The larger camp, enclosing 20 acres, lies wholly to the east of the earlier fortification. Its greatest strength is concentrated at its eastern end, where it is approached from level ground, and where the defences of the main entrance were most elaborate. It should be remembered that the object of defenders was not to conceal themselves in trenches, but to obtain a vantage ground from which to hurl missiles, and if possible to attack the right side of assailants unprotected by the shield. If we ask who made these camps, there are only two possible claimants for the achievement. They were certainly occupied by the men of the Bronze Age, Celts belonging to the Aryan Family, who possibly enlarged and strengthened their defences. But it seems equally clear that they were originally made by the men of the New Stone Age, that wonderful race, to whom the world owes its megalithic monuments and its "magic," which may be traced as far afield as America, the islands of the Pacific Ocean, and Australia. They are sometimes called the Mediterranean race, and they certainly made that sea a Neolithic lake much as the Romans afterwards made it a Roman lake. Their modern descendants are to be found among the Basques and the Finns, and the most convenient name by which to call them is the term Iberian. Some evidence for saying that the earliest makers of these forts were Iberians was furnished by Professor Boyd Dawkins when he addressed the Club at Hod Hill, on September 20th, 1898.* He connected the Hod Hill camp with the long line of similar camps which extends from the Mendips to the Sussex Downs, and with the lake dwellings at Glastonbury, all of which were inhabited down to the Iron Age, and refers to the pit dwellings that are still to be traced within the ramparts. Then, speaking I suppose of Hod Hill, he says:—"In one of the huts we have been so fortunate as to find a perfect skeleton. It belongs to the slightly long-headed

* Ibid, Vol. XIX, pp. lxxx, &c.

oval type of skull, absolutely identical with those skulls which General Pitt-Rivers has found at Woodcuts and elsewhere, belonging to the aboriginal population, the small dark Iberian stock which were in this country in the remote age of polished stone. Thus we can at once realise that the people who lived here before the Roman times were a small dark race, by no means barbarians, but farmers, iron smelters, spinners and weavers." It is rather disconcerting to find our Professor ignoring the whole of the Bronze Age and conquest of Neolithic Man by Celtic invaders. But there is one fact for which ample evidence can be found to-day, and that is, the persistence of this Iberian stock in the county of Dorset. It was not extirpated by the Bronze Age Celts.

What General Pitt-Rivers has to say in the matter will be found in his *Excavations in Cranborne Chase*, Vol. II, pp. 62 sq. He refers to the investigations of Dr. Thurnam which showed that the long barrows contained, besides relics of the New Stone Age, the bones of a particular race. Their height averaged 5ft. 5-4in. Their skulls were long, the proportion of the breadth to the length being as 71 to 100—much longer than that of any race now inhabiting Europe.

In the round barrows the average height of skeletons was 5ft. 8.4in., and the proportion of breadth to length of skull being 81 to 100—a rounder head than that of any race now inhabiting Europe. These are the Celts whom Caesar speaks of as the Belgae. The first invaders of this race were the Goidels. Afterwards came the Brythons. The Durotrigae, who may have given their name to our county, belonged to the long-headed Iberian race. Their skeletons were found in the British villages excavated on the Rushmore estate, often buried in refuse pits where the ground was easier to dig than in the undisturbed chalk. The bones showed that their owners had been afflicted with rheumatoid arthritis, or "poor man's gout." The race was clearly not exterminated by the Celts, but perhaps it was reduced to slavery and badly fed. The average height of these village skeletons is three inches less

than that of those buried in the long barrows. They continued to use the long barrows for further interments up to and after the Roman occupation. In the skulls found in the village interments the average proportion of breadth to length rises to 74; and there are a few quite exceptional skulls, one or two having the proportion of 82, and one or two that of only 68. These are results which might be expected from an admixture of the two races, the long-headed and the round-headed.

Returning now to Eggardun Hill, we find that among its interesting features are a number of pit-dwellings indicated by circular depressions. Of these there are at least 123 within the area of the main camp. There are none in the neighbourhood outside, which shows that they were constructed later than the ramparts. Five of them were carefully examined by Dr. Colley March and myself in 1900, and the results of the explorations are fully described in Vol. XXII of our *Proceedings*. The most interesting feature disclosed by our excavations is shown in a diagram there given. The top of the chalk down is here covered with a patch of clay in which a pit-dwelling would quickly become a pond. So, beneath the floor of the hut there was a drainage system consisting of a hollow filled in with coarse flints through which the rain would drain away, exactly as it is expected to do in all the houses now built in Parkstone, where it is not allowed to be taken into the sewers. Professor Boyd Dawkins has some words about these dwellings. He says: "Each of these depressions had a wall of wattle and daub, and, fortunately, some of them got burnt, so that you can see little fragments of burnt stick which have the marks of the vertical uprights of the hurdles on which the clay was plastered. They were round and absolutely identical in general construction with the circular huts built upon piles and platforms in the Glastonbury marshes." In some places there is evidence that these dwellings were used after the Roman conquest, but on Eggardun we found no trace of post-Roman occupation. Nor was any trace of metal found. The finds, indeed, were meagre. This negative evidence, however,

indicates an historical fact which has hardly received the attention it deserves. These hill-top forts were camps of refuge, needed to save from extermination tribes that were waging ruthless war against one another. They were not needed after the establishment of the "Roman peace." See how this is confirmed by the Roman roads. From Bokerly Dyke the Ackling Dyke (a continuation of the Icknield Via) points straight to Badbury Rings. It may well have been made in connection with the reduction of that British fortress. But having served this end, it does not enter Badbury Rings. This is not worth doing. A little north of the place the road divides, one branch passing east of the camp and going to the sea at Hamworthy, the other part turning west and entering Dorchester, which was worth entering, and leaving it to strike further west over the downs and bring up the legions and their supplies to attack the camp on Eggardun Hill. But when this camp was taken, the Romans had no use for it, and the road leaves it on one side and goes on its way to Bridport and Exeter. The Roman occupation of Britain was indeed a blessing to those who dwelt in the land. The slight hexagonal embankment in the centre of the camp is a modern enclosure made with the idea of sheltering young trees.

One final word about the "magic" stone which Dr. Colley March found in one of the pit-dwellings which we explored, and on which he wrote an appendix to our report. In recent years fresh discoveries have added to our knowledge of magic stones found in this and other countries. The key to their meaning seems to be furnished by the totemism of a tribe in Central Australia. The "cup-and-ring" markings, of which we have an example at Came near Dorchester, the circular and spiral scrolls and other devices, inscribed on stones worn as amulets, were the heraldic devices of those days, identifying the tribe, if not the individual, and determining the totem of a new-born baby. The subject has no very close connection with Eggardun Hill, but it indicates a line of investigation which is being actively pursued, and which may any day yield interesting and important results.



The Helstone.

By VERE L. OLIVER, F.S.A.

(Read 16th September, 1920).



THE Helstone is situated on Ridgehill, one of the spurs running up North to Blackdown from Portisham. It stands on a slight mound, which is more noticeable on the North side, but to the South there are only hollows, whence soil has evidently been removed. A field wall (older than 1803) runs across the mound North and South.

Hutchins, in his *History of Dorset* (1st edition), wrote, in 1774, that nearly all the upper stones were thrown down, the table-stone leaning on only one at the North, and that shepherds had dug a hole beneath it for a shelter. He gave a ridiculous plate of its supposed restoration, which looks like a round table on thick legs. In the 2nd edition, of 1803, an artistic illustration appeared showing the table-stone tilted and the existing field wall in the back-ground. What we now see may well be the remains of a long barrow which was placed N.W. and S.E. Hutchins stated that there was a terrace to to the N.W. leading to it 60ft. long, 30ft. broad at one end and 10ft. at the other; but the plough has obliterated all traces of this.

The Helstone is a Neolithic dolmen consisting of nine menhirs about 6ft. high out of the ground, surmounted by a cap or table-stone $10\frac{1}{2}$ ft. long, 6ft. wide and $2\frac{1}{2}$ ft. thick—all rough natural sarsens devoid of tool marks. Hutchins stated that the under part of the table-stone seemed roughly chiseled; but I cannot see any tool marks, not even of stone hammers. The gentlemen who restored or rather rebuilt the dolmen have not I think refixed the uprights as they should have been; for it was customary when one of the surfaces of a stone was fairly flat to place that side inwards, but some of these have been re-fixed edgeways like a slice of cake.

As this dolmen has been already described in three articles in our *Proceedings* I shall briefly recapitulate the various points raised.

The 1st article by the then editor, the late Professor Buckman, appeared in 1878.* It was accompanied by a rough illustration together with that of a similar one in the Morbihan for comparison. He stated that the stones were derived from the local sandstone of the tertiary formation, and pointed the resemblance to dolmens in the Channel Islands. A very excellent illustrated article in *Archæologia*, Vol. LV, on dolmens in Japan, proves that they also resemble ours.

At Long Bridy there is a very large menhir 10ft. high, called Hell-stone; there is another near Cerne; and a town in Cornwall (Helston) bears the same name. It has been thought that such stones were dedicated to "Hell" the goddess of the dead. Others derive the name from A.S. *Hele*, to cover, or from *Halig*, holy.

The 2nd article by the late Mr. E. Cunnington appeared in 1893,† and he was of the opinion that this had been a long barrow. The dolmen was rebuilt by the late Mr. Manfield about 1866.

The 3rd description, printed in 1908, was by the late Dr. Colley March,‡ and was illustrated.

* *D.F.C. Proceedings*, Vol. II, 104.

† *Ibid*, Vols. XV, 52-54; XVI, 175-177.

‡ *Ibid*, Vol. XXIX, pp. lxxv-lxxviii.

The word *Dolmen* is derived from two Celtic words *daul* a table and *maen* a stone, but the French nomenclature is I think preferable. They define *menhir* as an unfashioned upright stone; *lech* as a dressed menhir; *cromlech* as a group of menhirs in a circle; and *dolmen* as a chamber formed by menhirs covered by table stones, often approached by a gallery and usually covered by earth.

The Helstone, as we now see it, is therefore not in its original state; but Dr. Colley March thought that its restoration was satisfactory, as it is the only complete one in the county. When such stones have become dislodged within recent times, as in the case of Stonehenge, it has been considered permissible to re-instate them, otherwise it would be injudicious to interfere with them.

Dolmens were usually covered over with earth, constituting a chambered long barrow, such as this and the one at Gorwell two miles away; but occasionally they were intended to stand free or uncovered as in France. In our example the stones do not occupy a prominent site, and I believe they were originally covered. In that case the interstices between the uprights were filled in with rough walling, to keep back the soil. The numbers 9 and 3, often used for grouping the menhirs, have a mystic meaning. Long barrows may be simple or chambered, sometimes with an external dolmen, and enclosed by a peristalith of menhirs.

There are no circular chambered barrows in England, but there are elsewhere.

Dr. Thurnam estimated that there were 60 long barrows in Wilts*; and as there were 2,000 barrows of all sorts, he calculated that they averaged one long barrow to 35 round ones. He stated that Dorset contained only 12 long ones, mostly to the North towards Wilts. They were also found in Gloucestershire, Somerset and Hants (13 examples, Dr. W. F.), but very rarely in the rest of England. They were invariably isolated, quite two or three miles apart, from 100ft. to 400ft.

* *Archæologia*, Vol. XLII.

long, by 30ft. to 50ft. wide, of moderate height, with a trench along the sides, but not at the ends—in fact pear-shaped—usually lying east and west, the chambered east end being wider and higher; but one in six lie north and south. They were always associated with giants by local tradition, and that name often survives as a place name. A very interesting account of a chambered long barrow opened in Somerset in 1909 may be seen in a little book "*Records by Spade and Terrier*" by the Rev. J. Wickham. Canon Greenwell describes 13 which he opened in Yorkshire; but the most complete excavation ever made was that of Worbarrow on Handley Down by the late General Pitt-Rivers.

Chambered ones naturally occur more frequently in stone districts, sarsens being often utilised for their construction; but at Worbarrow, in North Dorset, there were traces of wooden supports. The plan varies, the simple ones having a passage leading to an inner chamber, sometimes divided into several cells. No sculpture is found as in Scotland, Ireland and Brittany, no metal, and as a rule no sign of cremation. Leaf flint arrow-heads and scrapers, bone implements, and a little coarse pottery, with bones of animals, such as deer, wild boar and cattle, are occasionally found. The numerous skeletons lie in a contracted position, but human bones are often found piled up promiscuously, possibly from the chamber having been used as an ossuary, or this may be due to rifling by treasure hunters.

Skulls (dolichocephalic) are the important factor, for, taking the length as 100, they average a breadth index of 69, much longer and narrower than any present race in Europe. The height of these men was not more than 5ft. 4ins., often less than 5ft. The Iberian type still to be noticed in the West of France, Spain, Portugal, Ireland and Wales, is supposed to have descended from the builders of Avebury and the long barrows.

The finest dolmens (3,000) are in France; but England is noted for its great circles, such as Avebury and Stonehenge.

In the Morbihan in Brittany, there are huge chambered tumuli, some with many carved stones. I had the pleasure of visiting them and also Carnac in 1914, with a few Salisbury friends, under the guidance of Mr. Doran Webb.

The long-headed race was undoubtedly the older, and must have been conquered and absorbed by the round-headed (brachycephalic) Bronze Age man, for long skulls may be also found in round barrows, but never round ones in long barrows.

As to the origin of these barrow builders:—Tumuli are to be seen in North Africa, especially Algeria, and West Asia beyond the Jordan. There is then a gap of 2,000 miles to India, and further east they occur in Burmah and Japan. In the steppes, North of Circassia, there are hundreds of thousands—near the home of the Aryans—whence they may have spread to the Baltic, but it is uncertain if Asia or Africa was the cradle of the race or cult. There are *no* dolmens in the Valley of the Nile, in Phœnicia, or its colonies. There is no record of any great migration; so it may be that a certain religion spread to many races across the world.

In Europe they are diffused over the Western side only, where they mark the course of prehistoric commerce, which skirted the shores of Africa as far as the Atlantic, and after passing along the coasts of Spain, Portugal, and France, ended at the British Isles. Another commercial route passed through Italy, the Islands of Sardinia and Corsica, across France and Brittany, to the English Channel.

The movement was probably from the Aegean to the North, rather than from Scandinavia to the South. The tombs of New Grange in Ireland resemble those of Crete and Mycenæ in Greece.

The last period of the Neolithic Age in Italy may be fixed at about 4,000 B.C., but stone tools may have been used in the North centuries after the introduction of copper or bronze in the South. No fixed dates are possible, for there was much overlapping, and authorities disagree; but by studying sections of ancient sites, such as in Crete, approximate dates are

obtainable. Pottery is also an invaluable guide in estimating the progress of Neolithic civilisation. Its decoration was first made with the thumb and finger nails, and there was an absence of curvilinear design.

Parallel lines, zigzags, striated triangles and dotted patterns abound. Later the incised lines on black ware were filled with a white substance; and colours and even slip work were introduced. Drinking cups, incense holders, urns, with clay figures of women, animals and birds, were made.

The Neolithic occupation of Knossos, in Crete, covered more than 3,000 years, and supplies dates for the rest of Europe, the whole period lasting perhaps 7,000 years.

The incised axes on certain stones in the Morbihan tumuli represent votive ones, and were a cultus object and symbol of divinity. There are menhirs in France and Sardinia which apply to the mother goddess of nature and are a link with the East. It is noteworthy that paleolithic ivory female figures have been discovered in France far superior to anything neolithic. And the study of all these prehistoric remains leads one to realise that our predecessors of the stone age were possessed of considerable skill and artistic talent with which they had not been usually credited.

We are fortunate to possess, in this neighbourhood, this dolmen, also a chambered long barrow and a cromlech. The downs about here are so crowded with barrows and megalithic remains as to constitute a veritable Mecca of the Neolithic and Bronze Ages. The Bronze Age barrow 45 yards S.E. was opened by Mr. Cunnington in 1894 and contained an urn of burnt bones with a stone covering its mouth resting on the undisturbed soil.* There are several large stones lying about, one of which especially seems to resemble a menhir.

* *D.F.C. Proceedings*, Vol. XXXVII, p. 47.



The travels of Peter Mundy in Dorset in 1635.

By NELSON MOORE RICHARDSON, Esq., B.A.

(Read December 7th, 1920.)



SOME years ago, I was applied to for information on certain points by Miss Anstey, who was assisting Sir Richard Temple in editing for publication by the Hakluyt Society, the MS. of Peter Mundy, a Cornishman, who spent most of his life in travelling in Europe and Asia, as well as in various parts of England. Two volumes of his travels had been published and the third, which deals chiefly with his voyage to China and contains the portion relating to Dorset, has only lately been printed, having been much delayed by the War. It having occurred to me that the Dorset portion would be of much interest to our Club, I obtained Sir Richard Temple's kind permission to read this at one of our meetings and print it in our "Proceedings" if thought suitable. Peter Mundy seems to have been a most observant man and, as far as I can judge from the little I have read of his travels, to have endeavoured to state and

describe what he saw and heard with more accuracy than some of these early travellers. The editor has taken much pains to obtain information which will throw light upon the present and former condition of things described in the travels and has added many valuable notes.

Before reaching Dorset, Mundy speaks as follows of lobster boats coming from Cornwall to Weymouth.

LOBSTER BOATES.

“Beinge safely arrived and welcomed home by my friends, in feiwe daies after I returned to London to sell some Indian Commodities that would not off [go off, sell] in the Countrey, and tooke my passage in a Lobster boate. There are 2 of them that all the Sommer longe doe goe and come to the west countrey to carry away such Lobsters as are there provided against their Comeinge downe by men lefte there on purpose, whoe buy them of the fishermen, and keepe them in potts till they come for them. Theis boats may carry each about 100 dozen, somewhat more or lesse, and in one Sommer they may carry away about 14 or 15000 Lobsters att the least. They take them not aboard until the wynde be faire for them, and then they lay them on the Ballace [ballast, *i.e.*, in the hold], and comonly within 48 howres they arrive att Weymouth. What [with being] in the boate and on Horseback before they arrive att London, they are neere $\frac{1}{3}$ part dead of them, which are little esteemed of and sold att low prices. With the rest the King’s Kitchin is supplied and then the Court and Cittie¹.”

After a short allusion to Falmouth and Torbay he comes to Portland.

PORTLAND.

“Next morninge wee departed and soe arrived att Weymouth, where haveinge occasion to staye a day or two, I went to the Peninsula of Portland, about 2 miles from the Towne².”

¹ A century later Cornish lobsters were sent direct to London by “Well-boats.” See Borlase, *Natural History of Cornwall*, p. 274.

² Four miles by land and three by water.

It is almost an Island, only a narrow Beach extending six miles¹ in length almost by the mayne, and Joyneth with it neere to Abbottsbury. Betwene the said beach and the Land the sea runneth upp Neere 6 miles as aforesaid, somewhat broad within, although att the passage not $\frac{1}{2}$ a stones Cast over, Heere bredd many Swanns, the Royaltie apperteyninge to Sir George Stranginge dwellinge neere by². Theis have their Winges pinnioned or unjoynted to barre them from flyeing away³. They breede among the Sedges on the Shoare and feede on the rootes and tender part of the grasse that growes in the water. There come divers wild ones amonge them, and in winter flock thither in abundance all sorts of Waterfowle.

“This indraught which cometh about by the Easter end of Portland was in hand to bee dreyned to make Pasture Land, whereon was spent great sommes of money in makeinge of sluces, trenches, etts. [and other] Inventions to keepe the Tide from comeing in, as also to lett out what is within. But as yet all is to litle purpose (This was in July 1635), the maine sea soakeing through the beach all alonge. It is sayd they will proceed afresh⁴.

¹ The beach is ten miles in extent.

² Mundy means Sir John Strangwayes. The Swannery, which still belongs to the Earl of Ilchester, a descendant of the Strangwayes, was granted to Giles Strangwayes in 1544 and to Sir John Strangwayes and his heirs in 1637. See Hutchins, *History of Dorset*, II. 723.

³ The Abbottsbury swans are no longer pinioned, but are marked in the web of the foot.

⁴ I have been unable to find any confirmation of this scheme for draining the Fleet in 1635, and the Dorset archæologists whom I have consulted can throw no light on the matter. Such a scheme nowadays would be hopeless unless an embankment were made all along the beach to keep out the water. Mr. Nelson Richardson, however, thinks it probable that in 1635 the mouth of the Fleet, by the present Ferry Bridge, was much shallower than it now is, for before the building of the breakwater, *i.e.*, in the early part of the 19th century, it was possible to ride or even walk across at low water.

" Now back to Portland, and somewhat of what is in it and about it. In compasse it may bee 5 or 6 miles highe land, especially the Easter end, much noted by Seamen as one of their marks saylinge alonge the Chanell, it makeing an excellent road betwene it and the mayne, with 2 Castles, one of each side, the one named Portland Castle and th'other Sandfoote Castle, whoe Commaund the said Road and landinge places thereabouts¹. The Southermost low Cleaves [cliffs] are worth notice, for passing betwene the Race and it with our boate they appeared like so many gates, portalls, or entrances, soe proportionable by nature, that scarce any would bee perswaded but that they were Cutt out by Arte, except hee were att and in one, as I was in one which was intirely seeled [ceiled] over with one flake [layer, sheet] of stone, 6 or 7 yards over, supporting the upper earth.

" Hard by in those Cleaves breed a Certen sea fowle named Pewitts²; many of them from hence carried to London, where they are kept, fedd and used for dainties.

" Right off lies the Race of Portland, avoyded by seamen by reason of the tumblinge, ripplinge, tempestuous, swelling waves, occasioned, as they say, by a very strong tide runninge over uneven ground, for in one place there may bee but 12 or 13 fathom, and neere to it 30 or 40 againe. On the Cleaves, 2 or 3 fathom above full Sea marke, are store of great Oyster shells, not as others groweing or sticking fast to the rocke, but encorporated into the same, some halfe out, some more, some lesse. The like is on Weymouth sides on the bancks where now the Sea cometh not neere, nor the Springe or wash of it. I have seene in other places Rocks whollye compacted of

¹ Portland Castle, commanding Weymouth Road, was built by Henry VIII, and Sandesfoot or Weymouth Castle was probably erected at the same time, c. 1530. See Hutchins, *History of Dorset*, II. 806—830 and Maton, *Observations . . . of the Western Counties of England*, I. 51.

² By pewitt, Mundy means the black-headed gull (*Larus ridibundus*), which, as Plot says, was "accounted a good dish at the most plentiful Tables." See *Nat. Hist. of Staffordshire* (1686), ch. VII. paras. 7—12,

shells, as well within as without. The reason may bee that those places in former tymes were under water, Oaze or Mudd, where those shelfishes did breede and feede. In tyme, the sea retireinge, as it is seene by experience, for where there was land and Townes now there is Sea, And where once shipps rode and boates did rowe are nowe howses built and corne reaped; Many that are now Islands in former tymes questionlesse joyned to the Mayne¹. I say, the sea withdrawing it selfe, it was exposed to the heate of the Sunn, by whose virtue Mudde, shellfish and all became one Rock.

“There I went to the hewers of stone, which was carried for the reparation of St Paules church in London. There were about 200 workemen, some hewing out of the Cliffe alofte, some squareinge, some carryeing down, others ladeinge. Some stones there were ready squared and formed, of 9, 10 and 11 tonnes weight, as they said; some of them ready squared aloft and sent downe in Carts made of purpose².

¹ I wonder that he does not refer this to the Flood which used to be considered the cause of sea things appearing inland. [N. M. R.]

² Portland stone began to be freely used for public buildings in the reign of James I. and was employed in the repairs of St Pauls and the erection of the Banqueting House, Whitehall.

Mr. A. M. Wallis has most kindly furnished me with a description of the trolleys which Mundy saw. These were in use up to about the year 1880, when cranes and four-wheeled wagons took their place. The two-wheeled carts were 4 ft. wide and 18 ft. long, made of three ash planks 5 in. thick, fastened by flat pieces of iron on the under side. The middle plank was shorter than the two outer ones, which were cut away to form the shafts and accommodate the horse. The wheels were of solid wood and boxed, more often oval than round; the axle was also of wood with a bar of iron let in on the under side. A back strap of knotted rope fitted on the back pad of the horse and took the weight of the load. There were no brakes. These carts carried 5 tons, and were drawn by a plow of eight horses, *i.e.*, eight horses in a string.

NOTE BY N.M.R.

It would seem impossible for one horse in the shafts to hold back a load of 5 tons on the Portland hills. When I first knew Portland about 1886, to the best of my remembrance, the carts were four-wheeled, but much otherwise as Mr. Wallis describes them, but on the slope horses were sometimes harnessed behind to hold back the weight, and a man with an iron bar

Other rough peeces as they were hewen out of the Rocke, were tumbled downe to bee squared belowe, The Rocke or quarry begininge alofte within halfe a Yard of the Surface of the earth which is of a reasonable good Mould.

"The Island, for soe it is also called, affoards noe fewell of Wood, there being very few trees or bushes on it¹. Perchance by industrey more might bee made to growe in it. But I rather thinck the Earth is naturally not soe apte to produce them, It beinge high, drye, a shallow mould, and somewhat stoney in most places. With the loose stones they make their hedges or partitions by only piling them one upon the other (beinge flatt), which resemble Park walls². It yieldeth good store of Corne, grasse and some hey, store of Cattle, especially sheepe, some excellent plaines and levell ground.

"For Fewell they use Cowdung, kneaded and tempred with short strawe or strawe dust, which they make into flatt Cakes, and Clapping them on the side of their stoney walls, they become dry and hard, and soe they use them when they

pushed it through a hole made near the rim of one of the hind wheels till the end caught against some part of the cart underneath and stopped the rotation of the wheel, making a very effective brake. I do not remember the use of a slipper for this purpose. These massive carts impressed us a good deal, as we never enjoyed meeting them on the hill when driving. The road was narrow and also rough and full of ruts, and they swayed about in an uncertain manner, whilst in parts there was only a very low wall of loose stones or even a mud bank between us and a precipitous slope ending in a pile of broken rocks. Later on traction engines were used, but the greater part of the stone went down in wagons on a little steep railway, the full wagons pulling up the empty ones. [N.M.R.]

1 Except round Pennsylvania Castle, there are still only a few scattered trees on Portland.

2 Stone hedges are still a notable feature in the landscape of the district.

NOTE BY N.M.R.

Even the field gates were until recently, made, like the hedges, of piled flat stones, which had to be taken down and rebuilt each time anything went through! This method will hardly stand the present labourer's wages!

have occasion. The very same fewell, and ordered in the same manner, doe they use in India as [?all] the Country over, by Hindowes [Hindus], and Baneanes [Banians, *Banyā*, Hindu trader] especially, which seemed strange to mee¹. They finde on the sea side a Flatt stone which the poorer sort use to burne, but it stincketh abhominably in burninge².

"Heere I saw a black fowle with Yellow Bill and Leggs, commonly called Cornish Dawes, many beinge of opinion that there were none elsewhere to bee seene but in Cornewall or neere adjoyninge. For my part, untill now, in all that I have gone, I never sawe none out of that sheire³.

"Moreover, Portland Oysters are most esteemed in theis parts⁴. It consists of one parish. They say it hath a Lord whoe hath his Title from it⁵. A strange alteration betwene

¹ Coker, *Survey of Dorsetshire*, ed. 1732, p. 38, remarks of Portland:—"The Grounde verie good for Corne, and indifferent pasture but soe destitute of Woode and Fuell, that the inhabitants are glad to burne their Cowe Dung, beeing first dried against Stone Walls, with which Groundes are enclosed altogether." Cowdung fuel was still in use in the middle of the 19th century. Exactly the same custom is still common all over India.

² Maton, *Observations . . . of the Western Counties of England*, (1794—1796), i. 33, 54—55, describes this "fossil-coal" as an "argillaceous slate in a high degree of impregnation with bitumen, and of a blackish brown colour . . . when burnt to ashes it is used as manure," Mr. Nelson Richardson informs me that the "flatte stones" were doubtless shale from the Kimmeridge Clay which is the formation at the base of Portland. He adds that Mundy is quite correct in his description of the smell.

³ The Cornish chough, *Pyrrhocorax (Fregillus) Graculus*, a rare bird, but Mr. W. L. Sclater informs me that it is occasionally found out of Cornwall on the British coasts as well as in parts of Europe, Asia and Africa. See Carew's remarks on this bird, *Survey of Cornwall*, ed. Tonkin, p. 110. See also Borlase's amusing description, *Natural History of Cornwall*, pp. 243—244.

⁴ Mr. Nelson Richardson is of opinion that Portland oysters are unknown at the present time. They were formerly found in the Fleet.

⁵ The Manor of Portland belonged to the Crown from the time of Edward IV. until 1800, when it was put up to auction. The first Earl of Portland, however, was Sir Richard Weston (1577—1635), Charles I.'s Lord High Treasurer, cr. 17th February, 1633; and it is probably to him that Mundy alludes.

this and the Maine, the distance being soe small. From the foote of the Island to the passage¹ is about a mile along by the beach, where in tyme past were store of Connies, now none, only their burroughes and holes yett to bee seene. And soe, leaveing the Island, I returned to the Mayne.

WEYMOUTH SNAILES.

“When I came over to Weymouth side, I found there on the grass a multitude of small Coulord shell snailes, $\frac{1}{2}$ as bigg as pease². The people report they dropp out of the Ayre, findeing them on their hatts as they walke the feilds³. The like is reported of the raineing of small frogg’s in the Isle of Jersy (where I had formerly bene)⁴. My brother⁵ also told mee that neere Weymouth hee himselfe saw one of theis walking Fires called *Ignis fatuus*, which only Crosse[d] his way without any more hurt⁶. The natural Cawses of theis things must be left to the decision of the Learned, as also of that light which is reported to appear on Shipps in or after stormes, termed by the Spaniard St. Elmo⁷, heere being of our Company that have seene them, gon to them and found a Jelly or froth, which soe shined by night, stickinge on their Mast Yards, etts.

DORCHESTER—MAIDEN CASTLE.

“From Weymouth I went to Dorchester. About the Midway is a place called Maiden Castle, because they say it

1 The mouth of the Fleet, now known as Ferry Bridge.

2 These shells now also swarm on Portland, and are said to give the Portland mutton its excellent flavour, being eaten by the sheep! [N.M.R.]

3 For notes on showers of living creatures, see *Notes and Queries*, 8th series, vol. VI. 104, 189, 395; VII. 437; VIII. 493.

4 Mundy went to Jersey in 1627. See vol. I. 144.

5 No further clue is forthcoming with regard to this individual. See vol. II. p. lxxv.

6 *Ignis fatuus*, popularly called Will-o'-the-wisp, Jack-o'-lantern, corpse-candle, &c.

7 St. Elmo is the patron saint of navigation.

was never overcome¹. It is now a little playne of about $\frac{1}{4}$ mile in compasse, somewhat ovall, neere to roundnesse, on the round topp of a hill, environed with 3 high bancks which made two deepe ditches or trenches, either of them beinge about 9 or 10 fathom high or deepe, and the circumference of the outer banck above $\frac{1}{2}$ a mile—a Worke of great labour; some Monument of the Danes or Saxons Fortification. Also, neere to Dorchester is another small place environed with a very high and steepe bancke, with a little plaine in the midle, of an ovall forme, resemblinge an Amphitheater², $\frac{1}{16}$ part of a mile about. Lykewise hereabout, as on Salsburye plaines, I saw and have seene divers longe trenches, one withiuf another the plaines, of greate use in Auntient tymes questionlesse.”

After this Mundy returns to London and shortly makes a tour into Hampshire.

¹ Maiden Castle in the parish of Winterbourne St. Martin, two miles south-west of Dorchester, is one of the largest British earthworks in the West of England. Mundy is repeating the popular legend regarding the name, which became attached to it at least as early as the twelfth century. The origin of the term “Maiden” in English place-names seems to be still unsettled. According to the *Oxford English Dictionary*, the sense may be “a fortress so strong as to be capable of being defended by maidens.” But the approved derivation of the Dorchester specimen is from British *mai dun*, great hill, the hill of the citadel or burgh. See Hutchins, *History of Dorset*, ed. 1863, II. 575.

² Maumbury Ring, an amphitheatre south-west of Dorchester, on the Roman road to Weymouth.



The Apple Tree Wassail— A Survival of a Tree Cult.

By W. O. BEAMENT, M.A.

(Read 7th December, 1920).



I PROPOSE for the purpose of this paper to consider firstly the ceremonies accompanying the Apple Tree Wassail which are, or were until lately, observed in the South West of England, and secondly to consider certain parallels to the rite which may be found at various stages of the civilisation of Western Europe. It may then be possible to indicate some connection between the two, and to suggest a theory which accounts for what I believe to be a genuine pre-historic survival on English Soil. At the outset, I ought to explain that the theory which I shall outline at the conclusion of this paper is not intended to be the result of any research. It is simply an indication of the lines along which I believe a possible solution of the problems presented by the Apple Tree Wassail may be found.

At the present day the custom of wassailing the apple trees does not appear to be observed in Dorset; and when I first commenced collecting material for this paper I was not aware

that it had been practised in our own county in recent times. However, our Vice-President, Judge Udal, has very kindly forwarded to me an extract from the manuscript of his forthcoming book on *Dorset Folklore* with permission to make use of it for the purposes of this paper.

Judge Udal refers to an article in *Folklore* for 1918 from which it appears that the ceremony observed in Dorset did not differ in any important particular from those still to be found in the sister county of Somerset. When we turn to the latter county, there is an abundance of material for consideration; and I propose to take as a representative account, and one which forms an excellent basis for discussion, the description of the ceremony given by Mr. Cecil Sharp in his note to Song 128, *Folk Songs, from Somerset*, 5th Series.

The rite appears to have been observed at Bratton on the 17th January, and the procedure as described by several witnesses is roughly as follows:—

Meeting about seven in the evening, the wassailers proceed to the orchard which is to be the scene of their first celebration, and, forming a ring round one of the oldest of the trees, dance round, singing a particular song, to the words of which I will presently revert. Cider, sometimes warmed, is then thrown upon the tree or poured over the roots to the accompaniment of much shouting, stamping of feet, and firing of guns. Before leaving the tree a piece of toast soaked in cider is placed in the fork of the branches. Mr. Sharp states that, on enquiry of one of the revellers as to what became of the toast, he was informed that "some say that the birds eat it, but I don't know."

There are five points in this ceremony which are worth considering:—

- (1) The Tree.
- (2) The Song and Dance.
- (3) The Libation of Cider.
- (4) The Noise.
- (5) The Offering of Toast.

It may be interesting to consider them briefly in detail as they appear to-day.

1. SONG AND DANCE. I cannot obtain any very clear idea of the dance itself. Whatever it may have been in the past, it does not seem to-day to be a set figure; it rather has the nature of a wild gambol round a tree by a number of men joining hands in a ring. Probably the fact that they have already wassailed each other in cider before setting out has some effect upon their gyrations. The words of the song are at the present day more or less doggerel. As given by Mr. Sharp they run as follows:—

Old Apple Tree we'll wassail thee
And hoping thou wilt bear
The Lord doth know where we shall be
To be merry another year;
So blow well and bear well
And so merry let us be
Let every man drink up his can
And health to the old Apple Tree.

Then follows a spoken piece, cheering, shouting, stamping and gun-firing. I have come to the conclusion, as a result of comparison between this and similar ceremonies, that the words have in comparatively modern times been substituted for more ancient formula having practically the same meaning. It is perfectly clear that the wish expressed is for a good crop of apples in the ensuing year.

It is rather curious that, in the Sedgemoor district, verses of the New Year Wassail Song are added to the Apple Tree Wassail.

2. SHOUTING, GUN-FIRING, ETC. The use of gunpowder, a comparatively modern invention, has led certain correspondents on this subject to suggest that we have a survival of a primitive method of pruning. The theory is—that in early days pruning was accomplished by beating the tree with a stick; and subsequently the firing of shot into the branches was used to obtain the same result. I am inclined myself to think that the gun-firing is merely a method of making a noise. Lieut. Latrobe-Bateman in describing his Congo Explorations

in the middle of the last century has noted that natives belonging to the Mohammedan faith fire off guns at certain religious celebrations. In this case he knows that the object is simply that of making a noise. It seems rather more likely that the idea of noise-making should be predominant in a rustic ceremony such as wassailing, rather than that it should be necessary to pre-suppose a primitive method of pruning, for which not only does no evidence exist, but which is moreover rather insulting to the intelligence of our ancestors.

3. THE LIBATION. This as it survives scarcely requires any comment. It can best be considered in the next section of the paper.

4. OFFERING OF TOAST. This is undoubtedly a real offering. Mr. Sharp's informant was clearly of the opinion that it was not eaten by the birds, although twentieth century materialism had made him rather shy of expressing this belief openly.

None of the participants in the ceremony, however, appear to have any very clear idea as to whom the offering was made. It seems that we have here a case in which folk-memory is rapidly failing. Toast is still placed in the branches because it is remembered that once the offering was made to someone or something. But in a few years, if the ceremony lasts as long, the reason will have been entirely forgotten; and I think this particular part of the rite will disappear entirely or we shall be definitely told that it is intended as an offering to the birds, probably in the hope that they will not attack the crop during the year.

In considering one or two interesting parallels to the Apple Tree Wassail, I should like to begin with a reminder that tree worship still survives in twentieth century England in other forms. The simplest, and the one which comes most readily to mind, is the Maypole dance. The Maypole is usually a dry pole perhaps with a sprig of green at the top, but was once, as Sir James Frazer has pointed out in the *Golden Bough*, a living tree freshly cut from the forest. It was also not so long ago that the "Jack in the Green" was a well-known figure in

village festivities. It is rather curious that, while Sir James Frazer lays great stress upon these two survivals, he does not in the *Golden Bough* refer to the Apple Tree Wassail.

Bearing in mind then that ceremonies, which at the present time appear to have a value only as burlesque, are none the less religious survivals, we shall be less surprised to find that our West Country Apple Tree Wassail has behind it a long and honourable history.

I must apologise for proceeding to state one or two facts which are probably well known to most of those present to-day, but my excuse is that their due remembrance is essential to the considerations I wish to advance.

It must be kept in mind that religions, and especially primitive religions as distinct from magical cults, fall generally speaking into one of two classes—they are connected with earth spirits or with sky gods. Without being irreverent, it may be stated that Christianity, following its predecessor Judaism, falls into the latter class; but this class is, at any rate in Western Europe, by no means the older. Men worshipped spirits of the earth before they worshipped spirits of the sky.

If one may make an extremely rough generalisation of the work of archæologists in the classical lands of the Mediterranean, it may be laid down that the first peoples of that region of whom we have knowledge were agriculturists who worshipped earth deities, and buried their dead; while, at a later date, they were encroached upon by, and ultimately fused with, pastoral invaders from the north,—a taller fairer race who worshipped sky and storm deities and practised cremation. If in the light of some of these researches we consider the various points of the Apple Tree Wassail we shall begin to see some connection between our folk custom and the religions of the ancient world.

The ritual song and the ritual dance are both expressions of the same idea. The dance expresses the result in action, the song is an expression of the wish in words. Thus the first men to dance round the tree, in the hope that a crop might be secured to them, were performing in their early world a

species of primitive ballet, endeavouring to depict in action and to sing in words the ideas of life and fertility; they imitated the desired result by showing themselves in possession of health, vigour, strength and agility.

The problem that presents itself at this point is:—why they should dance round the tree? The answer is that, just as gods have been made in the form of men and in the form of animals, so we are beginning to learn they have also been made in the form of plants. The tree is, if it may be so expressed, a kind of super-plant. It has an intimate connection with the earth. It towers in the air and it is strong and, generally speaking, has a long life. It is extremely likely that originally the ceremony which we are considering was not performed round an Apple Tree at all, but round some forest tree, in all likelihood an Oak. This is perfectly easy to understand if it be remembered that primitive man has connected the idea of life, as expressed in plant or animal, not merely with the plants which he eats or the animal which he uses for food, but with those which are not good for this purpose. Thus we have Snake Tribes and Rat Tribes when, generally speaking, the snake or rat is not a common article of diet. Totemism is far older and has exercised far more influence in religious developement than any idea of prayer for actual food. Thus assuming that originally our tree was a forest tree, that the religious idea grew weaker and weaker, and that people began to query why they did this thing, the ceremony, to make it appear more rational, would be transferred to a tree whose crop was actually of value as food, and in such a district as South-west England the natural tree to select would be the apple tree.

In the libation of cider we have an obvious magical survival. The cider is simply apple-juice, the blood of the tree, drawn from it last year. It may be assumed still to contain the life of the tree and is, therefore, poured back upon the roots or upon the trunk during the dead season of the winter in order that the tree may once more blossom and bear fruit. It carries from one season to another life and growth.

In this connection it may be interesting to note that the sacred tree and the sacred pillar are considered to be merely two aspects of the same thing. The tree is a living sacred pillar, a pillar is a petrified tree. Each is the house of a god or spirit, the place of its indwelling, a central point between the spiritual and material worlds.

Jacob, when he set up the Stone of Bethel, poured on it wine and oil in consecration and named it the "House of God," thereby indicating that for him at least it was the dwelling-place of the God of his fathers whom he proposed to serve.

The cider poured on the tree is not a drink for the spirit dwelling there. It is a rather more magical rite, indicating that the celebrant is trying to bring about a desired result by assuming it done. He pours cider because he wants cider next year.

In the sacred dance we have imitated the desired result; in the song we have expressed our wishes and hopes in words; by pouring cider we have done our best by physical means to secure that a comparatively dead tree will come to life. All this belongs to a very early stage in religious thought, when gods and spirits are scarcely as yet conceived as such. Primitive man thinks not so much of deities as of divinities—vague, half understood forces at work something like that which the natives of Melanesia call "mana." And this word is so expressive that it has passed into current anthropological jargon. Thus we have hitherto dealt only with forces which are more or less impersonal and can be controlled by magic, spirits not requiring to be sought in prayer because they are not regarded as possessing definite personal wills. It is the great distinction between magic and religion as we know it. With the former it is a matter of knowing how to do the right thing, while the latter is a question of personal relationship with a being. Now the noise brings us to the stage in which a being is introduced.

The shouting, stamping, and gun-firing, while they may in some measure express the joy of life, yet none the less are intended to awaken the spirit in the tree who has fallen asleep

during the winter and must be aroused in good time if he is to do his work in the coming spring. Elijah's taunt to the prophets of Baal was not merely sarcastic: to those who heard it meant something real. They were used to shouting to wake up their god when they had any particularly heavy work on hand for him to do. So the Wassailers shout to arouse the spirit of the tree.

The toast in the branches takes us one step further. Toast which is intended to disappear is obviously of no use unless it is consumed by somebody or something, and we have here an instance of the actual offering made to a god or spirit. It is rather interesting to query whether it is given in order that the god may do something in return, or as a bribe to induce him to refrain from doing harm. As a matter of fact in early religion God and the Devil are very much one and the same. It might be noticed in this connection that the vegetation spirit in Syrian mythology is Adonis, and his connection with Aphrodite is a matter of common knowledge. Aphrodite is always accompanied by birds—her doves have become a proverb. Is it then too fantastic to suggest that here in Central Somerset we have a direct survival of rites which in the golden days of Greece centred round the worship of the Maiden of the Sea-Foam?

I have already hinted at what is possibly an explanation of the survival of such rites as tree-cults in Britain. There seems very little doubt that such cults were originally the property of a people who were agriculturists, whose religion was the worship of earth divinities and who buried their dead. We know as a matter of certainty that this was the case in pre-historic times in Greece and other lands around the Mediterranean.

The early culture of Crete, of Mycenae and of the traditional site of Troy has afforded abundant evidence of the fact that the phenomena which I have just mentioned occurred together. Moreover from the same sources we know that at some time a pastoral people worshipping Olympian deities came down upon the Mediterranean from the North and were

fused with the original inhabitants of the basin, the result of which fusion can be seen in the strangely assorted collection of gods and goddesses which make up the Hellenic and Latin Pantheons.

Now it is a well-known fact that, even when one race is conquered by another, the ideas and institutions of the conquered survive with strange persistence. Thus there will be no cause for surprise if it be suggested that vegetation cults have persisted from very early times, and through various stages of civilisation, down to the modern world. It remains for us now to endeavour to connect the known facts of the Mediterranean area with the survivals which we find in our own country. I would suggest as a basis for further investigation a theory somewhat on these lines:—

Tradition and modern research alike lead us to believe that, when the Mediterranean race was squeezed between the mountains and the sea by the increasing pressure of the northern invaders, an outlet of escape was found in the far west, along the Spanish shores and into Gaul. The peculiar religious observances of an agricultural people can be traced along this route and into Britain. The traces of Neolithic culture in this country show that we are dealing with a people whose physical features, as far as can be ascertained, resemble those which Sergi has ascribed to the Mediterranean race; a people whose religious observances, so far as any evidence remains to us, were akin to those of primitive dwellers in the Mediterranean basin, and whose belief in future life and survival after death was connected with the under-world rather than with a heaven in the sky. I would suggest then that, in common with other survivals of tree-worship and vegetation cult, the Apple Tree Wassail is a survival of that common stock of religious experience possessed by those early inhabitants of Southern and Western Europe whom tradition has called in various places by the names of Pelasgians, Ligurians and Iberians.

These people, whom we know to have contributed to later Greek religion those elements dealing with the under-world,

the gods of the sea, the vegetation demons and those divine or semi-divine beings who possess the power of appearing in the form of beasts—such as Dionysus—would, as long as they remain agriculturists, practise their particular cults; and that these would, moreover, be learnt by any races who came into contact with them who wished to change from the wandering pastoral life to the more settled occupation of agriculture. Primitive man knew very well that it was useless to carry on an occupation until he had first of all put himself right with the spirits whose special concern that occupation was. This fact alone would explain how the ceremony could survive through various changes of civilisation and religion, and would also explain why so many of these customs have been able to make honourable terms even with triumphant Christianity.

The Apple Tree Wassail is one of the more obscure of these ancient rites, but it is none the less interesting, and I have endeavoured to put forward an analysis of its elements and a suggestion as to the lines on which further investigation may be pursued.

NOTE.—An article in *Folk-lore*, Volume XXXI, page 307, by Miss M. A. Berkeley, in commenting on some of the conclusions reached by Miss J. L. Weston in her work *From Ritual to Romance*, points out that Avalon in Afalon has the traditional interpretation of the “Isle of Apples,” and that Mr. Cook has in the “European Sky and Tree God” connected the “Apple tree of Avallach”—the “god” of Avalon—with magic trees of Irish legends and with the grove of Nemi. After shewing the connection of the Holy Thorn with sacred trees in general Miss Berkeley proceeds to set out evidence for the existence of an important and widely-known cult of the life principle at Glastonbury in early, and even in historic, times. The whole of the article is most suggestive in connection with the persistence of the apple cult in Somerset in modern times.



The Church Screens of Dorset.

By E. T. LONG.

(Read 7th December, 1920).



THE county of Dorset, unlike its near neighbours Somerset and Devon, is not famous for its church woodwork, and the remains of screens are comparatively few and unimportant. There can be little doubt that originally every church possessed its rood screen, and frequently parclose and chantry screens as well; but the destroying hand of fanatic and "restorer" has been very busy in this county. It is painful to reflect that during the last century several fine screens have been completely swept away, and among others we may specially mention those at Cranborne, Iwerne Minster, Okeford Fitzpaine and Hawkchurch, the first three of which retained the rood loft practically intact. Also we must not forget the shameful vandalism perpetrated at Wimborne Minster in 1855, when the fine Jacobean screen and stalls were mutilated, and the canopies of the stalls completely destroyed on the plea of obstructing the view so dear to Victorian restorers. However, in spite of much grievous vandalism and ignorant restoration, Dorset still retains a few examples of screen work which deserve careful

study, and which contain features which differentiate them markedly from the screens of the adjacent counties. One outstanding feature is the stone screens, which are located principally in the north of the county. These stone screens are all closely related, and consist of a plain solid base against which the lateral altars stood, and narrow openings above with cusped arches and central doorway. There is usually an embattled cornice on the top. These screens are to be found at Bradford Abbas, Thornford, Batcombe, Nether Compton and Cerne. The best is probably that at Nether Compton, which has traces of colour; and it is the oldest, since it seems to date from the latter part of the 14th century. At Cerne there was formerly no chancel arch, and the screen was surmounted by a stone tympanum. At the restoration the tympanum was removed and a chancel arch erected. At Thornford the hooks of the door remain. Wool and Knowle have mural screens consisting of triple arcades, and the lateral openings at Knowle were formerly filled breast high with walls against which the altars were placed. The noble Abbey Church of Milton retains the massive stone pulpitum, but the upper part has been largely rebuilt. It is of very plain construction, and has two flights of steps.

The first thing to be noted with regard to wooden screens is the fact that they are practically all of the rectilinear type, as opposed to the Devon and Somerset screens, which for the most part are of the arched form. It is true that both these counties contain a few rectilinear examples, particularly the latter county; but the finest and most characteristic are arcuated. So much so is this the case that the only arched example now remaining in Dorset is at Trent; and, as this parish belonged to Somerset until 1896, the screen too being in every sense a product of that county, it is hardly fair to consider it an exception to the general rule. Of course it is quite likely that some at least of the destroyed screens were of the arched type, especially those on the Devon and Somerset border. The majority of the surviving screens are late, and probably were erected at the end of the 15th or beginning of

the 16th century. At Winterbourne Monkton, however, are the remains of a screen which dates from the latter part of the 14th century and has tracery which is almost flamboyant. The remains of figure painting are very small, though probably several of the larger churches had screens adorned with saintly figures. Hilton possesses twelve well-preserved panels of the Apostles which originally came from Milton Abbey and are of considerable artistic merit as well as archaeological interest. In the Convent Chapel at Spettisbury is part of the base of a screen from the desecrated chapel of Whitford near Axminster, which retains some 14th century figure painting much anterior to any existing work in Devon, to which county of course this screen really belongs. Though it cannot be included under church woodwork, mention should be made of the fine screen in the refectory at Milton Abbey, which bears the date 1498, and the rebus of Abbot Milton, a mill and a tun. Although so few rood screens now remain, the rood stairs have survived in a large number of cases. There are very perfect specimens at Holwell, Stourton Caundle and Affpuddle; and at Belchalwell the loft was approached from the tower stairs, and the upper door still remains. At Stourton Caundle corbels for supporting the brestsummer of the loft remain at the south side. No rood loft now exists, but several carved and painted panels from the destroyed loft are preserved at Okeford Fitzpaine, while Trent retains the fan vaulting on which the loft stood. The three wooden figures of Apostles at Upwey supposed to have come from the rood loft are in reality Flemish, and were brought from the continent about 100 years ago—so the present Rector informed the writer.

Dorset is fortunate in possessing some good post-reformation screens which all date from the first half of the 17th century. Parts of the fine screen erected at Wimborne c. 1608 still remain, but are greatly mutilated. The screen and stalls here were erected when the choir was restored after the fall of the central spire in 1600, and were excellent specimens of Jacobean woodwork; but their evident and marked excellence

did not preserve them from the ignorance of the Victorian restorers in 1855. Judging from a woodcut in the last edition of Hutchins the stalls must have been among the finest pieces of Jacobean woodwork in the country, and their loss cannot be too deeply deplored.* The remains of the stalls have been made up into wooden choir stalls without canopies. Folke church was, with the exception of the tower, rebuilt on an extended scale in 1628, and is an interesting example of 17th century Gothic with many delightful details. The sumptuous contemporary fittings remain for the most part in spite of injudicious restoration. The screen, pulpit, font, altar rails and bench ends are all of excellent workmanship. The Chapter House at Forde Abbey was fitted up as a private chapel by Edmund Prideaux, Cromwell's Attorney General, in 1649, and contains an exceedingly rich screen of classical design. Iwerne Courtney and Melcombe Bingham have excellent parclose screens, both due to the liberality and piety of Sir Thomas Freke. The latter is dated 1619. The small church of West Stafford, restored in 1640, has an excellent screen of that date; while at Ibberton there is some 17th century screenwork in the tower arch with turned balusters, but it is in a rather dilapidated condition and has been much pulled about and altered.

Before passing on to the examination of the surviving screens in the county, a few words on the use of rood loft will not be out of place, especially as considerable misunderstanding seems to exist in some quarters on this question. It is frequently stated as an absolute fact that it was the custom to sing the Gospel and chant the lessons at Matins in the loft at the Mass on Sundays and feasts. Now, while it is quite certain that in Cathedral, Monastic and Collegiate Churches this was actually the case, there is no evidence to prove that this was done in the smaller churches. In the first place it would be decidedly inconvenient for the priest single-handed

* Illustrations of the screen and canopied stalls, as they were before the "restoration," may be seen in N. Whittuck's *Views of Wimborne Minster*, published by Henry Herbert, Wimborne, 1839. [Editor].

to come from the altar and ascend to the loft for this purpose. In the second place the stairs to the loft which survive in a large number of cases are quite unsuited for use by the priest in his vestments, since they are steep and narrow. On the other hand there is considerable documentary evidence that it was customary to place an organ in the rood loft, as the following extracts will show. In 1473 in an Exeter church there was paid "for making a seat in le roode lofte, when playing on the organys...7s." In the inventory of St. Stephen Walbrook, London, occurs—"In the same rood loft is a pair of organs.....the gift of Borton Wyns, grocer." In 1509 at Louth occurs the following entry, "for setting of the Flemish organ in the rood loft by four days.....xxd." The loft was also of use for supporting the rood with the Mary and John and the candles that burnt before the rood, and made it easier to attend to these lights, which on great feasts were often very numerous. It is likewise possible that the loft was used for the solemn Exposition of the Blessed Sacrament which took place on certain occasions of great importance, though this would only be at comparatively rare intervals and by special permission of the Bishop. In addition to the organ it is probable that the village choir was located there, and this fact would account for the worn condition of the stairs to the loft which is so often noticeable. Almost the only instance of the rood loft in a parish church being used for chanting the Gospel is at Long Melford, Suffolk, where it is recorded that "on Good Friday a priest then standing by the rood sang the passion," but, as Mr. Francis Bond pointed out, this does not necessarily mean that he was standing on the rood loft; and in any case Long Melford is a church of enormous size and in pre-reformation days had a large staff of clergy, so that the services would be carried out more or less as in a Collegiate Church. As to what was the usage in Cathedral and Collegiate Churches, Tattershall in Lincolnshire furnishes a good example. Here the fine stone screen and loft remain in good preservation, and in the centre of the east side of the loft is a projecting ambo with stone desk, which doubtless served for chanting the lessons at Matins, and possibly also for singing

the Gospel at High Mass. Another supposition is that the loft was used for preaching. However there is no evidence that this was ever the case before the reformation, though there are several instances of this use in post-reformation times. Another use of the loft was to support an altar. At York Minster there was an "altar of the Saviour at the little rood loft." Dr. Cox quotes an endowment at Grantham for masses to be said "in solario (i.e. the loft) before the great rood in the midst of the church." Numerous piscinas or traces of them remain in lofts or high up in the jambs of chancel arches, e.g. Bilton, Warwick; Deddington, Oxon; Maxey, Northants; New Shoreham, Sussex; Ross, Hereford; Tenby, Pembroke. At Malpas in Cheshire mention is made of the "chauntrie priest who singeth in the rood loft." There is one further use of the loft which is beyond all doubt, but it is a post-reformation use. The loft was frequently used as a private pew by the principal parishioners during the 17th and 18th centuries, and instances of this survived at Minehead, Taunton and Totnes until the latter half of the last century. Besides the rood screen there are parclose and chantry screens. Parclose screens divide the chancel from the aisles and are also placed across the aisles, while chantry screens enclose chapels and are frequently constructed in two sections at right angles. In these chapels were the altars of guilds and private persons endowed for the performance of masses for the souls of the donors. Occasionally also screens were placed across the tower arch with an altar on the west side, as at St. Andrew's, Norwich, where was the altar of Our Lady.

We will now proceed to give a description of the surviving screenwork of Dorset in alphabetical order, dealing first with the stone examples.

STONE SCREENS.

BATCOMBE.

This church was largely rebuilt in 1864, but the stone rood screen was fortunately retained and is in good preservation. It bears a close resemblance to the other examples in this part of the county, and consists of a solid base with narrow openings

above with quatrefoil heads, and an embattled cornice. It is constructed of Ham Hill stone, and has been carefully restored. The base is quite plain and the west side shows traces of the lateral altars; grooves for half door remain. At each end are engaged crocketed pinnacles and slight traces of colour.

BRADFORD ABBAS.

The screen here, like that at Batcombe, has a solid base with traces of the lateral altars, and narrow openings above acutely pointed with cusped arches and pierced trefoil spandrels; the central doorway is so cusped with trefoiled spandrels. The cornice is plain, and it seems probable that the wooden loft rested directly on it. This screen dates from the end of the 14th century, when the present church was rebuilt. We may add that this church contains some fine bench ends, and a good panelled timber roof painted with red and white roses.

CERNE ABBAS.

The screen is late Perpendicular and originally supported a solid stone wall, there being no chancel arch. However, at the restoration, the stone wall was removed and a chancel arch constructed, while the screen was provided with a cornice. The base is plain, and clearly formed a background for the lateral altars. The screen has been much restored and the original effect lost.

COMPTON NETHER.

This screen is an excellent piece of work and seems to date from the *latter* part of the 14th century. There are traces of colour. The base as usual is solid and the outline of the altars is clearly defined. The upper part on the north side consists of an open arcade, but the south side has one large opening in which it is possible that a wooden reredos for the altar was placed originally; but of this no traces remain. The space above the screen was formerly filled with masonry.

KNOWLE.

This is a 13th century example of a mural screen and consists of a plain triple arcade. Formerly the lateral openings were filled with a wall breast high, but this has unfortunately been removed, and the original effect quite spoiled.

MILTON ABBAS.

The noble Abbey Church of St. Sampson still possesses its massive stone pulpitum at the west end of the choir, but the upper part is largely modern work. The west side as it now exists is severely plain with central doorway and string course above. The loft is approached by two flights of stone steps on either side of the choir entrance. The loft is wide and spacious. The east side is plain and has been largely reconstructed with odd pieces of material. Two ancient paintings now stand on each side of the door on the east side, one of which represents King Athelstan founding the Abbey, and the other a Queen with a hawk. Possibly these came from the loft, but it seems more probable that they formed part of the wainscot of the canopies of the stalls.

THORNFORD.

The screen here has considerable affinity to its neighbour at Bradford Abbas, and was evidently copied from it. The detail however is inferior, and it is considerably later. One of the door hinges is *in situ*, which shows that these screens were originally provided with wooden doors.

WOOL.

Here is a mural screen of 13th century date consisting of a triple arcade. It is undoubtedly the oldest screen in Dorset, and shows the transition from the narrow Norman chancel arch to the wide Early English and Decorated examples. Doubtless the lateral arches were originally filled up solid breast high, as at Knowle.

WORTH MATRAVERS.

In a squint on the south of the chancel arch were some fragments of stone tracery which probably formed part of the screen. Traces of colour remained. These fragments were discovered by a former Rector in a farmhouse in the neighbourhood, and placed by him in the church. On making recent enquiries no traces of this screenwork could be found.

WOODEN SCREENS.

(1) *Pre-Reformation.*

AFFPUDDLE.

Part of the rood screen is now in the tower arch. It is early 16th century, but has been much pulled about. The cresting is of cast iron! The wainscot is now in two tiers, but the lower has Jacobean panelling like that behind the altar. The upper division has cusped arches. The frame of the doorway is modern. The middle rail is chamfered. Above are ogee cusped arches with dagger-shaped quatrefoils in the spandrels. The top beam is plain. There was formerly a tympanum in the chancel arch. The screen is spoilt by varnish. In the altar rails are eleven tracery heads from the screen and two modern ones. The reading-desk incorporates part of the panelling of the rood loft with tracery.

BERE REGIS.

The vestry screen in the north aisle is composed largely of early 16th century panelling—mostly linenfold. It is possible that this originally formed part of a screen, but it is more probable that it belonged to the old seating in the nave, some of which is still in use. There are two corbels, one bay west of the chancel arch, and these probably supported the front of the loft. As the rood stairs are on the north side of the chancel arch, the loft must have extended the width of the first bay, and was therefore of imposing dimensions.

CRANBORNE.

Until the year 1855 this church possessed an excellent wooden rood screen. In that year the screen was pulled down and stored in a neighbouring barn by the then Lord Salisbury. Some years later the barn was destroyed and the remains of the screen were removed piecemeal by the villagers. At the present time only one small fragment can be traced. This was discovered by the Vicar in a carpenter's shop. It is about one foot in length by three inches in breadth, and consists of two tracery heads. These heads are plain and rounded. The whole is covered with brown paint, but traces of the original colouring can be detected in places. Apparently the background was white picked out with red and gold. The loss of this fine screen cannot be too deeply deplored, especially as it had survived the fanaticism of the 16th and 17th centuries only to fall before the onslaught of the Victorian restorers.

DORCHESTER ALL SAINTS.

This church was rebuilt in 1845, and replaced an edifice erected in 1613, which in its turn succeeded a pre-reformation church. Behind the choir stalls are two pieces of screenwork identical in design. These must have belonged to the pre-reformation fabric. The wainscot in two tiers is Jacobean, and resembles some bench ends in the church. The standards are not framed up, being cut short at the wainscot. The upper part is late Perpendicular, and has tracery heads with crocketed ogee arches. The top beam is ornamented with detached leaves. There is a large cresting with pinnacles, which are clumsy and evidently do not belong to their present position. At present both screens are smothered in thick brown paint.

FONTMELL MAGNA.

In the tower arch is a good wooden screen of early 16th century date, formerly in the south aisle before the church was rebuilt. The wainscot is formed of linen fold panels, and

the lights above have tracery of rather curious design, and in two of the lights are roundels containing a man's head in early 16th century garb with monsters in the spandrels formed by the roundels. The door is old, but it is probable that originally it formed part of the screen proper, as both door-posts are modern. The base beam is modern; but the top beam is original and has banded stiff foliage. The tracery has considerable Renaissance detail, and the whole screen is an interesting example of the beginning of the classical revival.

GILLINGHAM.

Between the chancel and the north chapel is a portion of a Perpendicular screen of rather commonplace design. It has been much restored. The wainscot is plain, and the upper part consists of tracery heads with cusped arches. Both base beam and top beam are almost entirely modern. The standards are massive, and are the best feature of the screen. In the last edition of Hutchins it is stated that it originally formed part of the rood screen; but it was probably always a parclose.

HILTON.

On the north and south walls of the tower of this church are twelve painted panels of the Apostles, omitting St. Bartholomew and including St. Paul. These panels were apparently originally on the pulpitum of Milton Abbey, and were removed to Hilton towards the end of the 18th century. The figures are about four feet in height and the panels fully six feet. The painting is well executed, and there is much expression in the faces, especially that of St. Peter, which is very fine and evidently a portrait. As usual, he has the priestly tonsure. The figures have a checkered background and stand on pedestals. The names are on scrolls above the figures. Red, white and blue (now faded to grey) predominate. When Hutchins wrote in 1774 there were six other panels with the following saints, Our Lady, St. Bartholomew, St. Martin, St. Benedict, St. Nicholas, St. Sampson. It is much to be regretted that these have disappeared. The remaining twelve are in good preservation.

OKEFORD FITZPAINE.

This church retained its sumptuous rood screen and loft until the early part of the the 19th century. Only a few fragments now remain of its ancient glory. These are four panels from the front of the loft, each having three quatrefoils with paterae in the centre one above the other, also three panels with cusped ogee heads, which seem to have come from the east side of the loft. The front panels are considerably higher than the others. All the panels bear traces of gold, red and blue. A few pieces of the cornice enrichments remain, with trailing vine and traces of colour. There is a good description, in Hutchins, of the loft as it appeared prior to its destruction.

PORTESHAM.

The rood screen remains in tolerable preservation, but has suffered much from injudicious restoration. The base beam is modern, as is the panelling on the north side. The wainscot has rather meagre tracery on the panels, in the upper part of which holes have been bored, probably during the restoration. This tracery was most probably applied at the same time that the holes were bored. The middle rail is plain. The doors remain and have ogee tracery heads on the panels. The upper part of the screen has thick moulded muntins, and tracery heads with ogee foliated arches with quatrefoils in the spandrels. The top beam has a deep moulding. In the spandrels of the doorhead are Tudor roses. Both top beam and middle rail have a poor modern cresting.

PULHAM.

In the squints on either side of the chancel arch are inserted some pieces of wooden tracery of excellent design, which formerly belonged to the rood screen. Beyond these two fragments nothing now remains of the screen, but, judging from what has survived, it must have been a fine piece of work. Both fragments show traces of gilding and painting.

SANDFORD ORCAS.

Until 1896 this church was in Somerset. It retains in the tower arch an excellent late Perpendicular screen, with the doors intact, which is said to have come from Sherborne Abbey. The base beam is modern, and the top beam is disfigured by a clumsy modern cornice. It is framed up with massive moulded standards. The wainscot has cusped ogee heads breaking into foliage above, the whole being contained beneath two cusped heads. The middle rail of the screen is plain; but that of the doors has foliage. The lights have narrow ogee heads with foliage above surmounted by two trefoils. The doorhead is level with the spring of the screen lights, and is capped by ogee heads similar to the rest. Below is a four-centred arch with cusped roundels containing each a conventional flower in the spandrels. The door lights have plain trefoiled heads. The west side of the wainscot has ogee arches without foliage.

SHERBORNE—ALMSHOUSE CHAPEL.

The chapel of the ancient hospital of St. John Evangelist and St. John Baptist is divided from the ante-chapel by a 15th century wooden screen. The doors remain. The upper part of the lights has ogee heads, and the lower part below the transom is solid. There is a good cornice on both sides with trailing oak leaf. Over the ante-chapel is a gallery for the use of the female inmates. The screen is not improved by having the lights filled with appalling tinted glass. The gallery rail is 17th century work.

SPETTISBURY.

In the modern convent chapel is preserved part of the base of a painted 14th century screen which came from Whitford Chapel in Devon. It is of rough and massive construction. On the panels are four figures; Our Lady, St. Katharine, a King and a Bishop. The background of the figures is checkered. On the muntins is a rude floral design. The figures stand on brackets like those at Hilton. Red is the

predominant colour, and the robes are striped with dark blue. The base beam is gone, but the middle rail remains.

STANTON ST. GABRIEL.

The ruins of the ancient church stand in a lonely position near the sea. In 1841 the present church was erected a mile and a half inland. The old rood beam was transferred to the new building and erected at the entrance to the chancel. It has been much restored. The cornice and standards at either end are modern. Both sides of the beam are ornamented at regular intervals with conventional flowers attached to a banded roll moulding. The beam is in good preservation, and probably dates from the latter part of the 15th century.

STOCK GAYLARD.

In the vestry is preserved a single painted panel with a figure in scarlet robe with ermine tippet, holding a book. It probably represents St. Jerome. This panel was discovered during the restoration of the church in 1885. It was found embedded in the north wall of the nave near the chancel arch. There can be little doubt that it formed part of the rood screen. The panel is much decayed and the face almost obliterated; but it is an interesting example of figure painting which is so rare a feature of Dorset screenwork. During the restoration some remains of the rood beam were discovered, and the present beam is a conjectural restoration of the original.

TRENT.

Here is a magnificent rood screen of five bays with elaborate tracery of the usual Somerset type, but having a transom, in which respect it resembles the screens at High Ham and Queen Camel in Somerset, though it is not so lofty or well proportioned. It is practically intact, except that the north end bay has been deprived of its tracery to accommodate a doorway in the east wall of the nave, and the south-end bay has lost half of the tracery. The detail of the lights is very similar to Queen Camel; but here, the screen being lower, the

doorhead rises higher than the level of the transom. The lierne vaulting is intact on the west side only, and displays an unusual feature in the girdle rib which intersects the lierne ribs, and runs round the lierne vaulting half-way up its height. The cornices are very sumptuous and contain three rows of enrichment with a top cresting, all of which retain much colour and gilding. The lowest cresting has been repaired with plaster. The wainscot is ornamented with a sort of foliated canopy design similar to that on the screen of St. Decuman in Somerset. The doors are intact, though the upper part has been repaired. There is now no trace of the rood stairs, since the walls have been much pulled about and modernised. There is no doubt that this is the finest and most perfect screen remaining in Dorset, though, as we pointed out above, Trent was only transferred to this county in 1896, before which it was included in Somerset. This church also retains some fine bench ends and the remains of a rich 15th century pulpit similar to those at Queen Camel and Long Sutton. Part of it has been renewed in deal. This pulpit at present serves as a reading-desk. Both screen and pulpit are evidently copied from those at Queen Camel; but the detail in each case is inferior and rougher in execution.

WHITCOMBE.

There is no chancel arch in this church; but, until about 30 years ago, there was a plastered tympanum, which was at that time unfortunately removed. The beam which formerly supported this tympanum still remains in situ. It is roughly cut and devoid of all ornamentation. It is probable that the foot of the rood was fastened to this beam, and that the tympanum formed a painted background to the sacred figures. Occasionally the rood was painted on the tympanum, as at Ludham, Norfolk, and this may have been the case here.

WINTERBOURNE CAME.

Here is a good, but much restored, early 16th century screen. There is no chancel arch, and no traces of rood stairs. The base beam is modern. The wainscot has linen

fold panels, those on the north being modern, as is also the greater part of the middle rail. The doors remain, and are of the same design as the rest of the screen. The upper part has diamond-shaped muntins and ogee tracery heads. With the exception of those in the doors both muntins and tracery are modern. The tracery heads are picked out in gold. The top beam is original, and has a well-moulded cornice with one row of enrichment consisting of trailing vine. The top beam has an Elizabethan black-letter text: "Let us hear the conclusion of all things Fear God and keep his commandments for that toucheth all men for God judgeth all things."

WINTERBOURNE MONKTON.

Some remains of a fine late 14th century screen were discovered in 1870. The base, which consisted of an oak framework with three plain panels on either side, was too decayed to be preserved; but the tracery heads have been incorporated in the wainscot of the modern screen erected in 1870. These heads are most interesting, since they are the earliest wooden screenwork in the county. The tracery is Decorated in style, approaching flamboyant. The mouldings are deep and excellent. In the modern pulpit are incorporated two linen fold panels of early 16th century date.

WINTERBOURNE STICKLAND.

In this church between the chancel and the north chapel are the remains of a late Perpendicular screen of the usual rectilinear form. It was discovered during a recent restoration and probably dates from the early part of the 16th century. The wainscot has been removed and it has no tracery. The cornice is of a somewhat unusual design, and is similar to the wall plate of the restored chancel roof, which is probably contemporary with the screen. At present the screen is built into the wall, with no arch above; but, as the chapel only dates from the 18th century, the screen is evidently not in situ.

YETMINSTER.

As recently as 1890 the base of the rood screen remained in situ. Since that date all traces of it have disappeared. It is probable that it was swept away during the restoration of the chancel in the nineties. It was apparently a good piece of Perpendicular work, and its destruction is greatly to be deplored. Two corbels for the rood beam remain on either side of the chancel arch, but that on the north is a restoration. There are some good early 16th century bench ends in the nave; and both nave and aisles have excellent painted timber roofs.

(2) Post-Reformation.

FOLKE.

This church was, with the exception of the tower, completely rebuilt in 1628, and it still retains most of the excellent wood-work erected at that time. The screen is of three bays with pointed arches, each having a pendant at the apex. The wainscot, which is in two unequal tiers, seems to be modern. The doors only reach the level of the wainscot, and have each a round arch in the panels fitted with iron stanchions. The standards and front of the arches are well carved with Jacobean designs, including roundels. The entablature is plain, and surmounted by large ornaments and scroll work in the centre. The east side of the screen is somewhat plainer. In the central arch of the north arcade of the nave is a wooden arch closely resembling the screen. It is probable that it formed part of a manorial pew.

FORDE ABBEY.

The ancient Chapter House of this Cistercian Abbey was fitted up as a private chapel by Edmund Prideaux, Cromwell's Attorney General, in 1649, and still retains the magnificent screen erected at that time. It consists of three bays, of which the central is occupied by the doors. Each of the side bays is sub-divided into two with plain round arches, which

rest on moulded square shafts and responds with well carved capitals. The entablature has dentil ornamentation and is surmounted by a rounded pediment broken in the centre by a shield. The pediment has dentil ornamentation. The standards have bunches of flowers and elaborate capitals. The wainscot is plain, but the middle rail is richly carved. The doors have plain wainscot and middle rail, and the upper part consists of plain open frame. The space above the door-head is filled with open work consisting of an elaborate floral design, which is most effective.

IBBERTON.

In the tower arch of this church are the remains of a 17th century screen. It is of very mediocre design, and much decayed. The wainscot consists of plain panelling, and the upper part has turned balusters surmounted by a plain cornice. The door remains, but it does not seem to be in its original position, and the whole screen shows signs of having been much pulled about and dislocated.

IWERNE COURTNEY.

The nave and aisles of this church were rebuilt in the first quarter of the 17th century by Sir Thomas Freke, who erected a chapel at the east end of the north aisle for his own use, and enclosed it on the west and south by excellent wooden screens. That on the west retains the doors with original lock and hinges. There is an elaborate entablature supported on lions and heads of men, and surmounted by scroll work and ornaments, while in the centre is a coat-of-arms, of Freke on the west and Taylour on the south. The wainscot is in two tiers of plain panelling. Above, the screens consist of lights with curious stiff tracery having a chained bull's head in each light (the crest of Freke). The lights are divided by turned balusters with square bases and capitals, the latter being very elongated. The entablature is ornamented with trailing flowers. With the exception of the armorial bearings

the screens are identical in design, and they are in good preservation. This is probably the best post-reformation screenwork in the county.

LONG BURTON.

Quite recently two portions of Jacobean screenwork were recovered from the Vicarage stable here, and after being carefully restored were erected in the church at Easter, 1921. Each portion consists of two bays, and there is no doubt that originally they were placed in the two arches which separate the chancel from the north chapel. At present only one portion has been replaced in its original position, and the other has been placed in the tower arch. This second portion contains the door, which is treated in the same way as the other bays. The base beam and cornice are modern, as is the frame, but almost all the rest is original, and it has been conservatively restored. The wainscot consists of two tiers, the lower having plain moulded panels, while the upper has fluted fan-shaped ornaments. The middle rail and uprights have strap work, as has the top beam. The north side of the wainscot is plain. The space above the wainscot has iron stanchions, and on the top are more stanchions with arrow heads. These upper stanchions are shaped to the arch, rising gradually to the centre. In the stable there is another bay of screenwork, much later and plainer, with the same stanchions above and below. The older work probably dates from *circa* 1630, and is therefore contemporary with the woodwork at Folke.

MELCOMBE BINGHAM.

Between the nave and the south chapel is a wooden screen erected by Sir Thomas Freke in 1619. It has plain wainscot, while the middle rail is ornamented with interlaced circles on the north side. The upper part consists of turned balusters banded. The top beam is ornamented on both sides with alternate circles and squares. On a shield on the south are the initials S. T. F., and on the north the date 1619. The standards have deep continuous moulding. The doorway is at the west end, but it is doubtful whether there was ever a

door. In this chapel are two Jacobean benches with carved backs. Sir Thomas Freke, who died in 1633, was a considerable benefactor to church fabrics in Dorset. Besides rebuilding the nave of Iwerne Courtney and erecting screens there and at Melcombe Bingham, he also rebuilt the chapel at Melcombe Horsey about a mile from the parish church. This chapel is now desecrated, and used for secular purposes.

WEST STAFFORD.

This church was considerably restored and embellished *c.* 1640, and to this date belongs the fine screen. The wainscot consists of three tiers of panelling—the two lower being plain, while the top tier is carved with the interlaced circles so common in woodwork of this period. The upper part consists of round arches of wide span with turned mullions. There are no doors, but the doorway has a wide arch supported on corbels. The south end of the screen is cut short one bay from the wall to accommodate the pulpit. It is doubtful if this arrangement is original. The cornice is well carved on both sides. The muntins on the south side have been removed, and the east side of the top tier of the wainscot on the south is plain, while the north is carved on both sides.

WIMBORNE MINSTER.

The remains of the Jacobean stalls and screenwork are so jumbled together since the vandalism of 1855 that it is difficult to decide exactly what does really belong to the screen. At the present time there is a low screen composed of portions of the wainscot of the stalls. This consists of round-headed arches with keystones supported on turned columns with some excellent carving above. There is however a portion of the old screen worked up into the modern tower screen. This portion consists of part of the wainscot, and is of plain and massive construction. Of the upper part, which consisted of three open arches, there seem to be no remains, at any rate in the church. The mutilated stalls still retain their misericords with well-carved *babeuries*, and also some excellent elbow rests and desk fronts.



Dorset Gulleries.

By the Rev. F. L. BLATHWAYT, M.A., M.B.O.U.

(Read 1st February, 1921).



AT the present time it is probable that only two species of gull breed in Dorset, the Herring Gull and the Black-headed Gull. It is unlikely that the great Black-backed Gull was ever a regular breeder on the sea cliffs of the county, though a few somewhat doubtful records exist, and the same may be said of the Lesser Black-backed Gull, though as regards the latter species it is just possible that a very few pairs may breed, as examples are frequently seen consorting with the nesting Herring Gulls throughout the breeding season.

It is not proposed to say very much in this paper about the Herring Gull colonies, as these would rather fall into an account of the birds breeding on the Dorset cliffs; but as the paper is headed "Dorset Gulleries" it would not be right to omit mention of the colonies of these splendid sea-birds.

The Herring Gull breeds in large numbers on the Dorset sea cliffs, apparently preferring the chalk and Purbeck formations. Starting from the East we find the first colony on the high chalk cliffs where Ballard Down fronts the sea, some

of the birds choosing the isolated pinnacles of chalk a little distance from the shore. No more are found breeding until Durlston Head is rounded; but between that point and S. Aldhelm's Head there are numerous and almost continuous colonies on the Purbeck cliffs which there fall steeply into the sea.

The colonies are thickest just west of Anvil Point, east of Dancing Ledge, and especially along the east face of S. Aldhelm's headland from Seacombe to the Head, along which stretch there must be some 300 pairs of nesting birds. A good many breed on the cliffs at the S.W. end of S. Aldhelm's Head, but from that point I do not think many breed on the intervening Kimmeridge clay until Gadd cliff and the high chalk eastern sea-face of Bindon Hill are reached, and the lower cliffs just east of Lulworth Cove. A few nest along the cliffs between the Cove and Durdle Door, but the next large colonies are on the high chalk cliffs at Swyre Head and immediately to the west of Bat's Head, and from there along the chalk to White Nose. From this point the species does not appear to breed until Portland is reached, the coast presenting few suitable stations, and the Portland colony, small on the east side near the Convict Prison, and numerous on the west from Blacknor Battery to the Bill, appears to be the most westerly one in Dorset, as, so far as I am aware, the species is not met with again breeding in any numbers, if at all, until the Beer Headland in Devon is reached.

So much for the larger species, which has probably been a resident on the Dorset coast from time immemorial.

Let us turn now to the Black-headed Gull. Here we are faced with an interesting problem. Is this species a recent colonist in the county, or has it returned to haunts formerly colonized and since deserted? We perhaps cannot say, but at the last meeting of the Dorset Field Club an interesting point in our President's paper came to my notice which I will refer to. The paper was on "Portland" from Sir Richard Temple's edition of the *Travels of Peter Mundy, Cornishman, in England in 1635*.

"Hard by in those cleaves," wrote Mundy, "breed a certain sea fowle named Pewitts, many of them from hence carried to London, where they are kept fedd and used for dainties," Sir Richard, in a note on them, states that Mundy, by "Pewitt," meant the Black-headed Gull, "Pewitt" or "Puit Gull" being a local name for the species; but I cannot bring myself to believe that even three centuries ago this marsh-breeding gull ever displayed such habits, different from the present day, as to nest in sea cliffs, and I think that, as has been pointed out to me by the Rev. F. C. R. Jourdain, the term "Pewitt" was used in a loose and inaccurate way by Mundy, and that the young Herring Gulls were the species taken from the Portland cliffs to be fattened for food, as the young of this species as well as those of the Black-headed Gull were in old days considered a dainty. If however the word "cleaves" could possibly mean, not *cliffs*, but *marshy land* (i.e. cleaving, sticky), and if three centuries ago such land existed on, or around, Portland; then we have in Mundy's statement perhaps the earliest reference to the breeding of the Black-headed Gull in Dorset.

So far as I am aware, it is less than half-a-century ago that the Black-headed Gull began to colonize, or possibly re-colonize Dorset. I have searched old records of the occurrence of this Gull in Dorset and cannot find that it was regarded as anything more than a Winter visitor until 44 years ago. The late T. M. Pike records, in the *Zoologist* of 1877, that, in June of that year, about seven pairs of curious birds unknown to the keeper were reported by him as breeding on Littlesea, which birds on investigation he found to be Black-headed Gulls; and elsewhere he records that about the same time the species was breeding on a pond made for ducks on Rempstone Heath, so it is reasonable to suppose that somewhat less than half-a-century ago this species began to establish itself as a breeding species in the county.

The present breeding range of the Black-headed Gull in Dorset extends along the S. & W. sides of the Poole basin. I cannot pretend to give anything like a complete history of the various stations the birds have from time to time selected.

This is a marsh-loving species in the nesting season, the presence of rushes, water and swampy tracts appearing to be indispensable, and a very dry season often drives the birds from one district to another. It must also be remembered that the eggs are quite palatable and possess some market value under the name often of "Lapwing's" eggs (hence perhaps the name "Pewitt Gull"), and the Dorset colonies have from time to time, in spite of attempted protection, been severely raided, this process if carried to extremes alarming the birds and causing them to move off in a body to safer haunts.

A short account of the usual breeding stations may however be of some interest.

I. We will start with the colony on Littlesea, separated from Studland Bay by a low range of sand hills. As already stated, this appears to have been founded in 1877, and the late J. C. Mansel-Pleydell, in his *Birds of Dorset*, states that the birds were driven away by a dry summer at some date previous to 1888. Exactly *when* they returned I do not know, but I gather from correspondents that they were not there at the close of the 19th century, but began to return some six or seven years ago. I am informed that there was a strong colony in 1917 and apparently not so many in 1918. When I visited the spot on June 18th, 1919, some 60 pairs were breeding among the rushes on the west side a little to the south of the keeper's cottage.

II. The next colony going westward, is that on the Duck Pond on Rempstone Heath, belonging to Captain Marston, R.N. of Rempstone Hall. The birds have bred here, probably fairly continuously, for at least 44 years, and at times the colony has been a very large one. In 1894 a visitor stated that over 2,000 birds were there, and another observer a few years later described it as the densest colony he had ever seen. The largest estimate I know of, referring to the early years of the century, put the numbers at no less than 2,000 pairs! Some five or six years ago the numbers seem to have begun to dwindle, possibly through overcrowding, and in 1918 I am told the colony was not a large

one. On June 18th, 1919, I only saw about 30 pairs nesting there; but I was told that in spite of protection many of the eggs had that year been robbed, so possibly a large proportion of the birds had in consequence been driven to nest elsewhere. This pond is an ideal spot for the birds, there being a certain amount of open water, large tufts of rushes for the nests, swampy spots, and a thicket of large willows; and, if the spoilers can be kept away, the breeding birds will probably soon increase again to something like their former numbers.

III. N.W. of the Rempstone Heath colony, and no doubt an offshoot from it, is what we may call the Arne colony. The main establishment, consisting, when I saw it in 1919, of perhaps 800 pairs, is situated out in the spartina grass about half-a-mile S.W. of Round Island. Many others also nest nearer to Grip Heath and along the shore of Arne Bay; and in 1919 there were about 150 pairs at Patchin's Point. The birds however seem somewhat unsettled, and continually shift their stations, a high tide sometimes flooding out parts of a colony. A part of the Arne or Rempstone colony seems on one occasion to have shifted to Hartland Moor, a little to the S.W., where, in May, 1918, about 150 pairs were said to be nesting. These however had their eggs plundered, and moved elsewhere, and when I visited the spot on June 24th, 1919, only one pair was breeding there.

IV. The next colony is to the N.W. of Wareham, on Morden Heath. *I have never visited this, but it is probably also an offshoot of the colonies further east, and, from the evidence I have received, appears to have started somewhere about the year 1908. The numbers vary from time to time, but when at full strength there are perhaps over 500 pairs, breeding for the most part on the *Old Decoy Pond* and on another smaller pond not far distant. Several correspondents have described to me their visits to these

* Since the above was written I visited this colony with Dr. Haines, on May 26th, 1921, and estimated that from 800 to 900 pairs of gulls were breeding on two ponds on the heath. F.L.B.

ponds, and the numbers reported are very variable, the probable explanation being that the birds, as has already been said, shift their stations a great deal from both natural and unnatural causes. Dr. Haines of Winfrith has lately sent me very interesting accounts of the Morden colonies, and these, if left alone, will probably flourish.

So much for the main colonies; but other little settlements have from time to time occurred. Thus a few pairs have occasionally bred on the Chesil Beach, and I have seen eggs taken there about 1910. Many birds are also seen about Lodmoor, near Weymouth, through the summer; and, if none have as yet bred there, they may very possibly do so in the near future, as the spot is suitable. Mr. Parkinson Curtis also informs me that a few have sometimes bred on Brownsea Island in Poole Harbour; and elsewhere in the same district pairs are met with nesting away from the main colonies. A colony has also existed on Parley Common, east of Wimborne, starting, it seems, about the year 1900, and at times being of considerable size; but though the birds have certainly nested on the Hants side of the Common, I have never been able to prove that they were breeding on the Dorset side, the evidence being somewhat conflicting.

And so this sketch of Dorset Gulleries must end. A visit in summer, whether to the Herring Gulls on the cliffs or the Black-heads on the heath and marsh, is always a source of great pleasure to the bird lover. The Black-heads are the earlier to start laying, April being the time, if they are not molested; while, though some Herring Gulls lay quite at the end of the month, May is the normal time. The usual clutch of eggs for each species is three, and the habits and cries of each species have their own charms, and add much to the attraction of the sea cliffs, the swampy heath-pools and the marshes of our beautiful county.



The Founding of Dorchester, Massachusetts, and the Rev. John White.

By Captain J. E. ACLAND, F.S.A.

Read February, 1st, 1921.



HE founding of Dorchester, Mass., dates from the year 1630, i.e., ten years later than the better known expedition of the *Mayflower* to Provincetown and Plymouth. The movement that induced "The Pilgrims," to leave their homes, and face the risks and hardships of the "Great Enterprise," was in its origin of a definitely religious character, thus quaintly recorded by a chronicler of the period.

He writes—"When many most godly and religious people that dissented from the way of worship then established by law in the realm of England were being denied the free exercise of religion after the manner they professed according to the light of God's Word, and their own consciences, they did remove themselves and their families into the Colony of the Massachusetts Bay in New England, that they might Worship God without any burthensome impositions, which was the very motive and cause of their coming."

In connection with this Puritan (or Separatist) movement, definite and combined action may be traced as early as 1607, when William Brewster, a gentleman of good social position, organized a Church of Puritans at the little village of Scrooby in Nottinghamshire, where "on the Lord's Day he entertained the members with great love" in the Manor House. William Bradford of the near-by village, Austerfield, who became afterwards Governor of Plymouth (Mass.), was closely allied with Brewster in this movement. In the following year, 1608, being threatened with imprisonment (for the Act of 1593 made Puritanism an offence against the Statute law), they and their friends left England for Amsterdam, under the leadership of Rev. John Robinson, removing to Leyden in Holland in 1609.

Not wishing to lose their English nationality, which must have been the case had they remained in Holland, they once more started on their travels, sailing to Southampton in the *Speedwell*, August, 1620. Here they found other Puritan Pilgrims waiting for them in the *Mayflower* with the object of crossing the Atlantic, and founding new Colonies in a new land, with freedom of laws and religion which they could not hope for at home.

The *Mayflower* and *Speedwell* started down channel in company, but after delays at Dartmouth and Plymouth, *Speedwell* was finally abandoned, some of her passengers being taken on board *Mayflower*, which little vessel of 180 tons, with 102 passengers, left Plymouth on 6th September, and after a dangerous voyage reached Provincetown, Cape Cod Harbour, on 21st November, and New Plymouth, 21st December, (N.S.) 1620.

Although, up to this time, Dorset had made no important contribution to the flow of settlers into the New Country, there can be no doubt that the movement was coming more and more under the influence of the Rev. John White, Rector of S. Peter's and Holy Trinity, 1606—1648, "Patriarch of Dorchester," known later as "Father of the Massachusetts Colony." Born at Stanton St. John in Oxfordshire in 1575, he was educated at Winchester and New College,

Oxon, being elected Fellow of the College, 1595. A man of conspicuous piety, learning, and power, a moderate but earnest Puritan, he was in touch with the struggle for religious freedom from its earliest days. Living in Dorchester at the time, he would have been specially interested in the emigrations of the "Pilgrims" from the Southern ports, Southampton, Weymouth and Plymouth, and gave both sympathy and assistance to the original emigration in the *Mayflower*. In 1623 he personally organized the formation of a "trading post," or station for fishing vessels, at Cape Ann, under Roger Conant. Near the spot where the first settlers landed there is now a fine bronze tablet set in a rock at State Fort Park, with the words

On this site in 1623 a Company of Fishermen and Farmers from Dorchester, England, under the direction of the Rev. John White, founded this Massachusetts Bay Colony.

About 20 years later, this Cape Ann settlement was given the name "Gloucester," as at that time a large number of emigrants from the English town of that name had arrived there.

White next devoted all his energies to the acquisition of a Massachusetts Bay Charter, a most important event in the history of New England; it being mainly due to his skill and perseverance that the Company was ultimately formed. He journeyed frequently to London to create and cement the great alliance between the wealthy London merchants, and the seamen of the West of England. Before the final consummation of this work, other enterprises closely connected with Dorchester and Dorset were undertaken by Parson White, which prepared the way for future developments.

The founding of Charlestown, in which the Spragues of Upwey took a leading part, is recorded in a pamphlet written by Mr. Henry Sprague, published in Boston, U.S.A., in 1910. He proves by evidence from early records that the first permanent settlement in Massachusetts Bay was due to three brothers, Ralph, Richard, and William Sprague, sailing from Weymouth in the *Abigail* in June, 1628, reaching Naumkeag

(now Salem) on 6th September. He quotes from an independent historical account of the settlement,* that "the inhabitants that first settled in this place, and brought it into the denomination of an English town, was in Anno 1628, as follows, viz.:—Ralph, Richard and William Sprague, John Meech, Simon Hoyte, Abraham Palmer, Walter Pamer, Nicholas Stowers, John Stickline, with Mr. Bright, Minister to the Company." The father of the three brothers was Mr. Edward Sprague, a fuller, and owner of the old mill at Upwey.

There seems little doubt that the Spragues went out in the *Abigail* with John Endecott, himself a native of Dorchester, selected as supervisor of a Company organized by J. White (more or less in the Puritan interest) for the purchase of land between the Merrimac and Charles Rivers. They would have been of great assistance in promoting this undertaking, being described as men of "character, substance and enterprise, excellent citizens, and generous public benefactors." In the following year, 1629, his Company was re-inforced by emigrants filling three ships, one of them called the *Lyon's Whelp*, consisting entirely of passengers from Weymouth and Dorchester.

Endecott had full power to take charge of the plantation, and to begin the "Wildernesse work." As a ruler he was zealous and courageous, behaving to the Indians with marked justice. It is recorded of him that, together with his Puritan Council, he objected to the growing of tobacco, as they "believed such a production, except for medicinal purposes, was injurious both to health and morals." They also insisted on the abolition of the use of the *Book of Common Prayer*, Endecott earning the title of "Puritan of Puritans." He exercised the chief authority as Deputy Governor, until the arrival of John Winthrop, the first Governor elected under the Charter of the home authorities. The original Mass. Plantation thus became a self-governing community, by

* John Greene, appointed to transcribe the records of Charlestown, at a meeting of the Select men, 18th April, 1664.

Royal Charter, sealed 4th March, 1629, to the Governor and Company of Massachusetts Bay, in New England.

The embarkation of Winthrop and his company from Yarmouth in the *Arbella*, in March 1630, was the occasion of the issue of a remarkable letter entitled "The humble request of his Majesties Loyall subjects, the Governor and the Company late gone for New England, to the rest of their brethren in and of the Church of England for the obtaining of their prayers and the removal of suspitions, and misconstruction of their intentions." It was printed in London, in all probability drawn up by John White himself, although not one of the emigrants, being in fact a formal leavetaking, and exhibits very clearly the spirit in which the enterprise was undertaken. It has been re-printed, facsimile, by the New England Society of New York, a copy being presented to our Museum Library by the John Carter-Brown Library, Providence, Rhode Island, from which a few extracts are now taken, of special interest with reference to the reputed author.

It begins

"Reverend Fathers and Brethren, the general rumour of this solemn Enterprise, wherein ourselves with others are engaged, as it may spare us the labour of imparting our occasion unto you, so it gives us the more encouragement to strengthen ourselves by the procurement of the prayers and blessings of the Lord's faithfull servants..... We beseech you therefore to consider us as your Brethren, standing in very great need of your helpe, and earnestly imploring it."

"And howsoever your charity may have met with some occasion of discouragement through the misreport of our intentions, or through the disaffection, or indiscretion, of some of us, or rather amongst us, yet we desire you would be pleased to take notice of the principals and body of our company as those who esteeme it our honour to call the Church of England from whence we rise our deare Mother, and cannot part from our native Countrie where she specially resideth without much sadness of heart and many teares in our eyes..... Be pleased therefore Reverend Fathers and Brethren to helpe forward this worke now in hand, which if it prosper you shall bee the more glorious."

"It is an usual and laudable exercise of your charity to commend to the prayers of your congregations the necessities and straights of your private neighbours; Doe the like for a Church springing out of your own bowels..... What goodness you shall extend to us in this or any other

Christian kindness, wee shall labour to repay in what dutie wee are or shall be able to performe, promising, so farre as God shall enable us, to give him no rest on your behalves, wishing our heads and hearts may be as fountaines of teares for your everlasting welfare, when wee shall be in our poore Cottages in the wilderness, overshadowed with the spirit of supplication through the manifold necessities and tribulations which may not altogether unexpectedly, nor, we hope, unprofitably befall us.

Your assured Friends and Brethren

From Yarmouth	Jo. Winthrop, Gov.	Rich. Saltonstall
aboard the <i>Arbella</i>	Charles Fines	Isaac Johnson
April 7, 1630	George Phillips	Tho. Dudley
	&c.	William Coddington

About a month in advance of the *Arbella*, a company met at Plymouth, where the *Mary and John*, a vessel of 400 tons, had been chartered for the voyage, the first ship of the fleet of 1630 to arrive in Massachusetts Bay. These are the Pilgrims that are termed the "Founders of Dorchester." Among them were, Roger Clap, Henry Wolcott, Thomas Ford, George Dyer, William Gaylord, William Phelps, William Rockwell, Israel Stoughton, George Minot, George Hall, Richard Collicott, Nathaniel Duncan, and Captains Mason and Southcote.

The 17th June, 1630, (N.S.) may be safely named as the official birthday of our namesake in Massachusetts. It is fixed by two reliable authorities. In the First Parish Church, Dorchester, is a tablet bearing the following inscription:—

"Dorchester, named from the town of Dorchester in Dorset, England. The first settlers sailed from Plymouth, England in the *Mary and John*, one of the Winthrop fleet, March 20, 1630, arrived at Nantasket, now Hull, May 30, and landed in Dorchester June 6, 1630.*"

Also, at the great gathering in Dorchester to celebrate the 250th anniversary of the planting of the Church, and foundation of the Town, the 17th June (N.S.), was the date observed.

Thus as the *Mayflower* stands in history for the founding of the New England States at Provincetown and Plymouth, so does the *Mary and John* mark the commencement of the colony of Massachusetts Bay, composed for the most part of

* These dates are Old Style.

emigrants from Dorset and the Western Counties. When she was ready to leave Plymouth, John White was on the spot to speed the Pilgrims on their way. Although the commercial aspect of the emigration was not forgotten, the religious character of the movement was always kept in view. A proof of this is the fact that before leaving these shores the Pilgrims on the *Mary and John* selected their pastors, and organized themselves as a Christian Church. One of the passengers has left on record that "a solemn day of fasting and prayer was held, and that Mr. John White of Dorchester was present and did preach unto us the Word of God; the people did solemnly make choice of and call those godly ministers to be their officers, so also the Rev. Mr. Warham and Mr. Maverick did accept thereof, and expressed the same."

Two hundred and fifty years after this scene was enacted, two great religious gatherings took place in The First Church and Parish, Dorchester, Mass., on 31st March, and 17th June, 1880, to commemorate the gathering of the Church at Plymouth (just mentioned), and the arrival of the Dorset Colonists in America. The celebration was an important event, the Governor of the State being present, with his staff, and also the pastors of the Dorchester and Boston Churches and many descendants of the early settlers. An address was delivered by Rev. Dr. Hale, an authority on the early history of New England, who pronounced with no uncertain voice the debt they owed to John White. He said:—

"If we build statues to our heroes and founders, it would be to John White of Dorchester, the founder of Massachusetts, that we should build the first. Let him be clad in his ministerial robes and bands, as when he spoke his farewell to the colonists. Let him bear in his hand the Sacred Book he was so fond of illustrating. So let us show who conceived the idea of this free State, and who was the very hero who called this free State into existence. Do not think simply of Dorchester. Let us remember that it is the birth of Massachusetts that we are celebrating. It is the birth of the Colony of the Bay that we are celebrating. The hero of the

Colony, the founder of the Colony, is John White of Dorchester, England. It was he who made the great alliance between the London Merchants and the sea-men of the West of England. It was he who taught Old England what it was which was waiting for them in the pre-emption of New England. It was John White who blew that Gospel trumpet. (Gather yourselves together, your wives and little ones, the people of Christ oppressed and denied, and be shipped for His Service in the Western world, the united colonies of New England). Yes—John White is the hero of this day,"

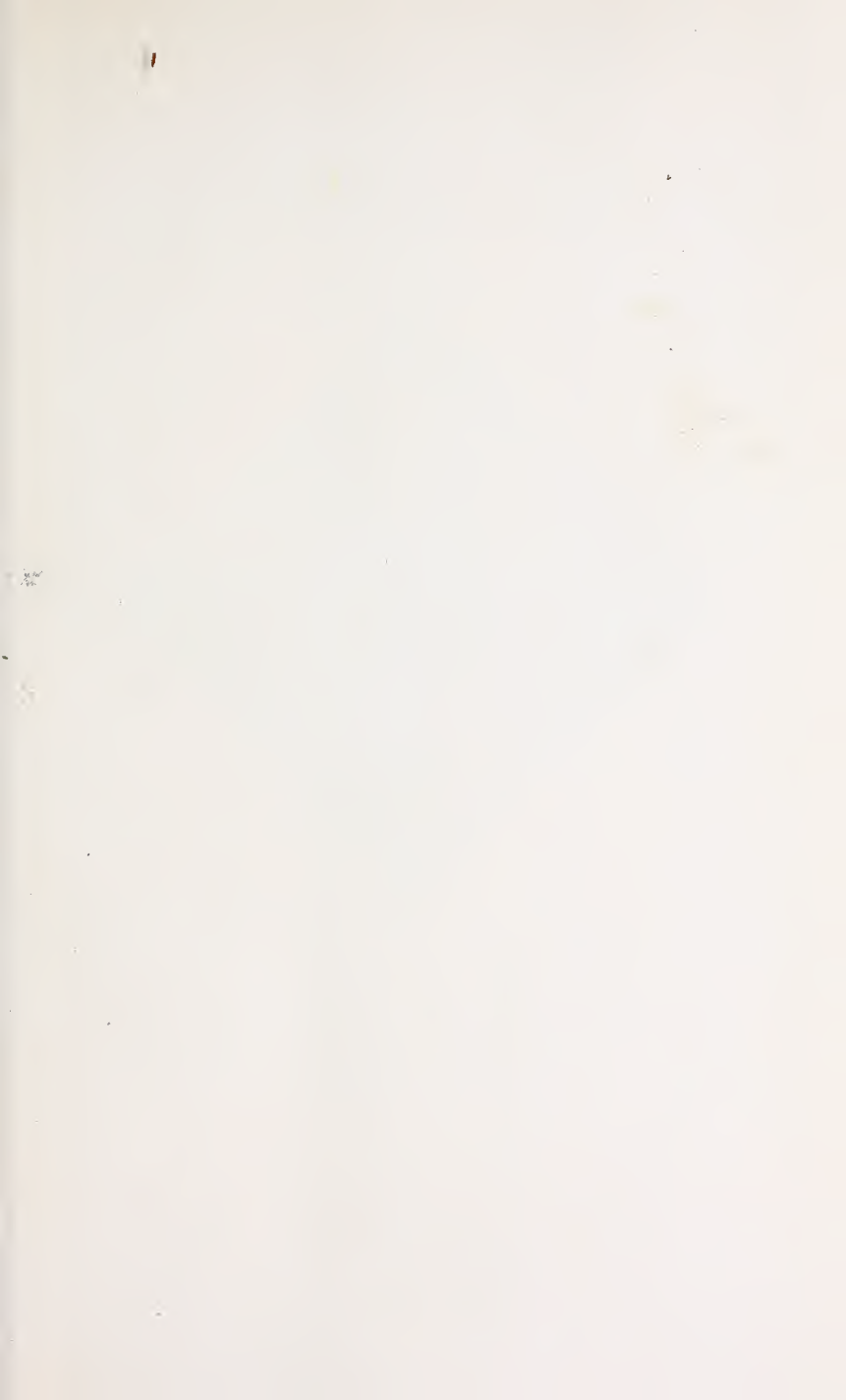
Grand words surely for us to remember, a testimony to his character and life work that had stood the test of two centuries and a half, uttered by one who had personal and impartial experience of the fruitfulness of his labours.

Another glimpse into his personality is given by Thomas Fuller, a contemporary (1608—1661) and indeed Rector of the Dorset parish of Broadwindsor, who gives a characteristic sketch of White in the *Worthies of England*.

"A grave man, yet without moroseness, as he would willingly contribute his shot of facetiousness on any just occasion. A constant preacher, so that in the course of his ministry he expounded the Scripture all over, and half over again, having an excellent faculty in the clear solid interpreting thereof. A good governor, by whose wisdom the town of Dorchester was much enriched; knowledge causing piety, piety breeding industry, industry procuring plenty unto it. He absolutely commanded his own passions and the purses of his parishioners, whom he could wind up to what height he pleased on all important occasions."

Verily he had "a strong sway in the town," as is recorded of him in the porch of S. Peter's Church.

There is not much more to be said of Master White and his connection with the Puritan emigration. Our Dorchester declared for the Parliament party at the commencement of the Civil War, with which the Puritan Patriarch would have agreed most heartily. In 1642 a troop of Prince Rupert's Horse attacked the town, broke into Parson White's house, carrying off or destroying his books. Taking refuge in London he was given duty as Minister of the Savoy, and Rector of Lambeth, being appointed also one of the West-





Memorial brass erected in the Porch of St. Peter's Church, Dorchester, Dorset, to the Rev. John White, the inscription written and designed by the late Mr. Henry Moule.

minster "Assembly of Divines." He was able, however, to return to his old home and Rectory, where he died 21st July, 1648, and was buried in the Porch of the Church of St. Peter.

Another Memorial to the "Patriarch of Dorchester" may be seen in Holy Trinity Church, Dorchester. An oak panel at the West end of the Church gives a list of Rectors dating from the year 1302 A.D. (The two parishes of Holy Trinity and S. Peter having been united down to 1824 A.D.). It is recorded that this panel, erected in 1902, is "In Memory of the Rev. John White, 45 years Rector of Holy Trinity and St. Peter's, Dorchester, by Members of Holy Trinity Church and those who revere his memory in Dorchester, Massachusetts."

Names of Ships trading from England to America, 1620, onwards.

Speedwell	James—from Bristol
Mayflower	Elizabeth
Mary and John	Hercules
Abigail	John and Dorothy
Arbella	The Rose
Lyon's Whelp	Defence
Sparrowhawk—wrecked	James

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**Phenological Report on
First Appearances of Birds, Insects, &c.,
and First Flowering of Plants**

IN DORSET DURING 1920.

With Other Notes on Local Natural History.

By the Rev. F. L. BLATHWAYT, M.A., M.B.O.U.

Notes have been received from :—

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|------------|---|
| (W.J.A.) | W. J. Ashford, Blandford. |
| (F.L.B.) | The Rev. F. L. Blathwayt, Melbury Osmund,
Dorchester. |
| (W.P.C.) | W. Parkinson Curtis, Drake North, Sandringham
Road, Parkstone. |
| (G.D.D.) | Dr. G. Dru Drury, Corfe Castle. |
| (S.E.V.F.) | The Rev. S. E. V. Filleul, Sandford House,
Wareham. |
| (F.H.H.) | Dr. F. H. Haines, Winfrith. |
| (C.W.H.) | C. W. Hewgill, Compton Lodge, Weymouth. |
| (R.H.) | R. Hine, Beaminster. |
| (A.B.H.) | The Rev. A. B. Hutton, Loders, Bridport. |
| (W.W.M.) | W. W. Male, Bridport. |
| (F.G.P.) | Dr. F. G. Penrose, East Cliff, Bournemouth. |
| (N.M.R.) | Nelson M. Richardson, Monte Video, Weymouth. |

(J.R.)	The Rev. J. Ridley, Pulham Rectory, Dorchester.
(L.R.)	Leigh Robinson, Netherbury.
(E.S.R.)	E. S. Rodd, Chardstock House, Chard.
(J.H.S.)	Dr. J. H. Salter, Verwood.
(J.E.S.)	J. E. Symond, late Tank Corps, Wareham.
(E.E.W.)	Miss Ellen E. Woodhouse, Chilmore, Ansty.

NOTES ON MAMMALS.

Natterer's Bat. Two specimens obtained at Loders Vicarage, on August 29th and 30th. (A.B.H.)

This is a very interesting record, and the only other record for Dorset appears to be from the extreme East of the county about the year 1874 (see *Proceedings*, Vol. XXIV, p. 19).

NOTES ON BIRDS.

The following notes, some of unusual importance, will be of assistance in tracing the distribution of the rarer species in the county.

Marsh Warbler. Several pairs hatched successfully, Blandford district. (W.J.A.)

Dartford Warbler. Observed in many new localities in E. of county. (W.J.A. and J.E.S.) Three fully-fledged young, May 18th, and the young of a second brood had not left the nest on June 28th. (J.H.S.)

Grasshopper Warbler. Nesting Hooke. (R.H.) Several pairs breeding in Wareham district. (J.E.S.)

Black Redstart. On Church, Blandford, Oct. 30th. (W.J.A.) Verwood, Nov. 11th. (J.H.S.) Swanage, Dec. 17th. (F.G.P.)

Redstart. Passing, but not breeding, Verwood. (J.H.S.) Breeding Melbury Park. (F.L.B.)

White Wagtail. A party of 6 or 7 on migration, on Lodmoor, Weymouth, May 6th. (F.L.B.)

These were easily identified in their spring plumage, and appeared tamer and more silent than Pied Wagtails; the alarm note was also weaker than that of the commoner species, and was a *treble* rather than a *double* note. This species has not often been recorded for Dorset, but it probably passes through every year at the periods of migration.

Cirl Bunting. Winterborne Abbas, April 6th. (F.L.B.)
Weymouth, May 6th. (F.L.B.) Bridport, May 21st.
(W.W.M.)

Woodlark. Increasing in the Heath and Pine district in East of county. (J.H.S.) Breeds also in West Dorset, newly hatched young, May 8th. (F.L.B.)

Dipper. Records of breeding or probable breeding from Loders, Netherbury, Melbury Osmund, Weymouth, Sherborne, Dorchester, and also on the rivers Piddle and Frome nearly as far as Wareham. The neighbourhood of Wareham apparently marks the most eastern breeding station of this species in the South of England.

Wryneck. Common in many parts East Dorset. (W.J.A.) Three seen April 6th, and heard April 14th, Winfrith. (F.H.H.) Not common Netherbury; heard there March 22nd. (L.R.)

Greater Spotted Woodpecker. Often seen, Netherbury (L.R.), and Melbury Osmund district. (F.L.B.)

Lesser Spotted Woodpecker. Rare, Netherbury. (L.A.) Fairly common, Melbury. (F.L.B.) Heard March 11th, Winfrith. (F.H.H.)

Montagu's Harrier. Noticed on Heath towards Corfe Castle, on April 19th (W.J.A.), and at Abbotsbury by the Decoyman and others on May 2nd. A pair about Morden Heath during the summer. (S.E.V.F.)

Common Buzzard. Melbury Park, during February. (F.L.B.)

Stone Curlew. Three localities on Downs, N.E. Dorset. (J.H.S.) Heard about Bulbarrow during summer. (F.G.P.) Eggs near Beaminster (seen F.L.B. and R.H.) One trapped autumn not far from Bridport. (A.B.H.)

Curlew. Nested near Verwood, unusual. (J.H.S.) Three pairs nesting on heath South of Wareham. (J.E.S.)

Gadwall. On Sherborne Lake there were two pairs on Feb. 4th, one pair on April 23rd and one pair on June 3rd. (F.L.B.) The late date points to the possibility of breeding, though the fact was not established.

Pintail. Two pairs on Sherborne Lake, Feb. 4th (F.L.B.)

Shoveler. Sitting on ten eggs, Abbotsbury Decoy, May 7th. (F.L.B.)

Golden-eye. One immature, Melbury Park, Nov. 4th. (F.L.B.) about 30 Poole Harbour (one adult male), Dec. 26th. (F.G.P.)

Long-tailed Duck. One immature, Abbotsbury Swannery, April 6th. (F.L.B.)

Roseate Tern. Seen on the Chesil by F.L.B. on May 14th, May 24th (3) and June 9th. A pair were probably breeding, but no absolute proof.

Sandwich Tern. Two, Chesil, April 6th; a party of eight, Lodmoor, May 11th; one, Chesil, May 15th; five or six, Chesil, June 9th; no proof of breeding. (F.L.B.)

Lesser Tern. Two, Lodmoor, May 4th; 12, Chesil, May 6th, and found breeding later in the summer, but apparently in somewhat reduced numbers. (F.L.B.)

Little Gull. Swanage, Sept. 23rd. (F.G.P.)

Slavonian Grebe. C.W.H. noticed small parties of six or seven in Weymouth Bay between Feb. 16th and April 6th, and F.L.B. noticed them there on March 22nd.

Black-throated Diver. A pair, Weymouth Bay, May 3rd, in full breeding plumage, (F.L.B.); seen in same place, May 13th. (C.W.H.)

Water Rail. Nest of eight eggs, Poole Harbour, April 28th. (J.H.S.)

NOTES ON MACRO-LEPIDOPTERA.

Colias Edusa. One, Swanage, May 30th; 26, mostly on coast, July 28th—Sept. 11th; one var. *helice*, Chapman's Pool, Aug. 11th. (G.D.D.) One, Melbury Osmund, one near Sherborne, June 3rd; one, Melbury Osmund, Aug. 3rd; two, Swanage, Sept. 10th. (F.L.B.) Two, (Aug. 2nd and Sept. 10th), Monte Video, (N.M.R.) From August 8th onwards in some plenty. (F.H.H.) From August 12th—Sept. 12th, great numbers on coast near Bridport. (W.W.M.)

Liminitis Sibylla. Two seen, Purbeck, July 13th, the only specimens noticed this season. (G.D.D.)

Polygonia C-album. A specimen was seen in March in the Vicarage garden at Winterbourne Whitchurch by the Rev. H. H. Tilney-Bassett, who also saw two specimens in a collection at Milton Abbas, caught in a lane near that place in August. There are scarcely any recent records of the appearance of this species in Dorset.

Melitaea Aurinea. Appearing May 21st, common by the 25th, near Yetminster. (F.L.B.) Out by May 20th. (W.P.C.) Two larvæ, Broadwindsor, April 18th. (W.W.M.)

Pararge egeria. On wing as late as Oct. 14th, Melbury Osmund. (F.L.B.)

Cyaniris argiolus. Spring brood out April 24th. (G.D.D.)
Second brood, July 20th. (F.H.H.) A few in the spring,
Bridport. (W.W.M.) Abbotsbury, May 24th; June 1st,
Melbury Osmund; June 3rd, Sherborne. (F.L.B.)

Adopæa actæon. On wing, May 24th, (F.H.H.) an early date.

Deilephila livornica. A female captured at Parkstone, May
19th. (W.P.C.)

Acheronlia atropos. A perfect specimen in a barn at Shipton
Gorge, May 12th; one taken at Charmouth, Oct. 7th.
(W.W.M.)

Acronycta alni. Full fed larva on plum tree, Melbury Osmund,
August 7th, (emerged May 8th, 1921). (F.L.B.)



THE APPEARANCES OF THE SCHEDULED BIRDS, 1920.

Name of Bird.	Verwood. J.H.S.	Winfrith F. H. H.	Ansty E. E. W.	Pulham J. R.	Weymouth N. M. R.	Melbury Osmond F. L. B.	Nether- bury L. R.	Chard E. S. R.
(1) <i>Muscicapa grisola</i> Flycatcher	First seen or heard May 1	May 9	May 23	..	May 13	May 9	May 3	..
(2) <i>Turdus pilaris</i> Fieldfare	First seen Autumn Nov. 25	..	..	..	..	Nov. 22	Dec. 8	..
(3) <i>Turdus merula</i> Blackbird	Song first heard ..	..	..	Mar. 17	..	Jan. 17	Feb. 8	..
(4) <i>Turdus iliacus</i> Redwing	First seen Autumn ..	..	..	..	..	Oct. 20	..	..
(5) <i>Daulias luscinia</i> Nightingale	First seen or heard April 17	May 18	..	April 30	..	April 13	..	..
(6) <i>Saxicola cinerethe</i> Wheatear	" " April 4	..	..	..	..	..	..	..
(7) <i>Phylloscopus trochilus</i> Willow Wren	" " Mar. 29	Mar. 30	..	..	..	April 9	Mar. 30	..
(8) <i>Phylloscopus collybita</i> Chiff-Chaff	" " ..	Mar. 27	..	Mar. 28	..	Mar. 29	Mar. 12	Mar. 29
(9) <i>Sylvia cinerea</i> Whitethroat	" " April 18	April 17	..	..	..	April 21	April 9	..
(10) <i>Alauda arvensis</i> Skylark	Song first heard ..	Feb. 6	..	..	Mar. 5	Feb. 5	Feb. 12	..

THE APPEARANCES OF THE SCHEDULED BIRDS, 1920.

Name of Bird		Verwood J.H.S.	Winfrith F. H. H.	Ansty E. E. W.	Pulham J. R.	Weymouth N. M. R.	Melbury Osmond F. L. B.	Nether- bury L. R.	Chard E. S. R.
(11) <i>Corvus frugilegus</i> Rook	Commenced nesting	"	"	"	Mar. 7	"	Feb. 23	"	"
(12) <i>Ouculus canorus</i> Cuckoo	First seen or heard	April 17	April 12	April 17	April 18	April 18	April 16	April 17	April 18
(13) <i>Hirundo rustica</i> Swallow	" "	April 7 (1)	April 14 (3)	April 9	April 16 (6)	April 17	April 12 (5)	April 8 (11)	"
(14) <i>Chelidon urbica</i> House-martin	" "	April 20 (1)	April 9 (4)	April 16	"	"	April 20 (9)	May 1 (12)	"
(15) <i>Cotile riparia</i> Sand-martin	" "	April 13 (2)	"	"	"	"	"	"	"
(16) <i>Cypselus apus</i> Swift	" "	April 20 (13)	April 27 (5)	"	May 1 (7)	June 10	April 26 (10)	April 27 (7)	"
(17) <i>Caprimulgus europaeus</i> Night Jar or Goat Sucker	" "	May 14	"	"	May 21	"	"	"	"
(18) <i>Columba turtur</i> Turtle Dove	" "	April 29	May 9	"	May 9	"	"	May 7	"
(19) <i>Orex pratensis</i> Corncrake or Land-rail	" "	"	"	"	"	"	"	"	"

(1). Last seen, Oct. 9th. (2). Last seen, Sept. 21st. (3). Last seen, Oct. 2nd. (4). Last seen, Oct. 20th. (5) Last seen, Aug. 10th.
 (6). Last seen, Oct. 8th. (7). Last seen, Aug. 12th. (8). Last seen, Oct. 12th. (9). Last seen, Oct. 30th. (10). Last seen, Aug. 8th.
 (11). Last seen, Sept. 30th. (12). Last seen, Nov. 1. (13). Last seen Aug. 3.

FLOWERING OF THE SCHEDULED PLANTS, 1920.

Name of Plant.	First Flower	Winfrith F.H.H.	Ansty E.E.W.	Pulham J.R.	Weymouth N.M.R.	Nether- bury L. R.	Chard E.S.R.
(1) <i>Anemone nemorosa</i> Wood Anemone	First Flower	Feb. 27	Mar. 9	Mar. 24	Mar. 21	Mar. 3	Mar. 30
(2) <i>Ranunculus ficaria</i> Lesser Celandine	"	Jan. 21	"	Feb. 3	Feb. 13	Feb. 1	Mar. 10
(3) <i>Caltha palustris</i> Marsh Marigold	"	Mar. 1	"	Mar. 22	April 3	Mar. 23	"
(4) <i>Cardamine pratensis</i> Meadow Lady's Smock	"	Mar. 9	April 6	Mar. 21	May 2	Mar. 17	"
(5) <i>Sisymbrium alliaria</i> Garlic Hedge-mustard	"	April 3	April 4	Mar. 28	April 18	"	"
(6) <i>Viola Reichenbachiana</i> Dog Violet	"	Feb. 27	Jan. 1	Mar. 15	Mar. 18	Feb. 14	"
(7) <i>Stellaria holostea</i> Greater Stitchwort	"	Mar. 3	Mar. 23	Mar. 17	April 5	Mar. 17	"
(8) <i>Geranium robertianum</i> Herb Robert	"	April 24	May 18	"	"	"	"
(9) <i>Æsculus hippocastanum</i> Horse Chestnut	"	"	"	April 12	April 10	"	"
(10) <i>Vicia sepium</i> Bush Vetch	"	April 21	"	"	"	Mar. 28	"
(11) <i>Prunus spinosa</i> Black Thorn	"	Mar. 1	Mar. 6	Mar. 17	Mar. 6	Mar. 12	Mar. 20
(12) <i>Rosa canina</i> Dog Rose	"	May 27	May 25	May 21	June 8	"	"
(13) <i>Cratægus oxyacantha</i> Hawthorn	"	April 21	May 6	April 27	April 16	"	May 5
(14) <i>Hedera helix</i> Ivy	"	Sept. 22	Sept. 12	"	Sept. 19	"	"
(15) <i>Cornus sanguinea</i> Dogwood	"	June 4	June 7	"	"	"	"
(16) <i>Sambucus nigra</i> Elder	"	April 28	May 18	May 27	April 25	"	"

Name of Plant.	First Flower	Wintrith F.H.H.	Ansty E.E.W.	Pulham J.R.	Weymouth N.M.R.	Netherbury L.R.	Chard E.S.R.
(17) <i>Dipsacus sylvestris</i> Wild Teasel	"	July 22	July 26	..	..	..	..
(18) <i>Scabiosa succisa</i> Devil's Bit	"	July 13	..	..	..	..	..
(19) <i>Centaurea nigra</i> Knapweed	"	May 27	June 7	..	July 6	..	..
(20) <i>Carduus arvensis</i> Field Thistle	"	June 21	May 24	..	June 26	..	..
(21) <i>Tussilago farfara</i> Coltsfoot	"	Mar. 1	..	April 15	..	Mar. 17	..
(22) <i>Achillea millefolium</i> Yarrow	"	May 27	June 21	..	July 4	..	..
(23) <i>Chrysanthemum leucanthemum</i> Ox-eye Daisy	"	May 15	May 18	..	May 30	..	..
(24) <i>Hieracium pilosella</i> Mouse-ear Hawkweed	"	May 7	..	..	..	..	..
(25) <i>Campanula rotundifolia</i> Harebell	"	July 12	July 19	..	..	..	..
(26) <i>Convolvulus sepium</i> Greater Bindweed	"	July 5	June 28	..	July 4	..	..
(27) <i>Mentha aquatica</i> Water Mint	"	July 27	..	..	..	..	..
(28) <i>Nepeta glechoma</i> Ground Ivy	"	Mar. 25	April 1	April 4	Feb. 23	..	..
(29) <i>Corylus avellana</i> Hazel	"	Jan. 21	Jan. 25	Jan. 17	..	Jan. 22	..
(30) <i>Primula veris</i> Cowslip	"	Mar. 5	Mar. 14	Mar. 6	April 16	..	Mar. 29
(31) <i>Scilla nutans</i> Bluebell	"	April 6	Mar. 30	Mar. 27	April 16	..	..

THE APPEARANCES OF THE SCHEDULED INSECTS, 1920.

Name of Insect.	Corfe Castle G.D.D.	Winfrith F.H.H.	Ansty E.E.W.	Pulham J.R.	Weymouth N.M.R.	Melbury Osmond F.D.B.	Nether- bury L.R.	Chard E.S.R.
1 <i>Melolontha vulgaris</i> (Cock-chaffer).	..	May 14	..	..	May 13	..	May 5	..
2 <i>Lamproyris noctiluca</i> (Glow-worm).	..	..	..	..	..	..	May 7	..
3 <i>Apis mellifica</i> (Common Hive Bee).	..	Feb. 18	Mar. 18	Mar. 3	..	..	April 25	..
4 <i>Vespa vulgaris</i> (Wasp)	..	..	..	May 26	April 29	..	Mar. 20	Mar. 30
5 <i>Pieris rapae</i> (Small White Butterfly).	..	..	..	..	April 6	..	Mar. 22	..
6 <i>Anthocharis cardamines</i> (Orange-tip Butterfly).	May 7	..	..	..	May 2	May 3	April 21	..
7 <i>Epinephile janira</i> (Meadow-brown Butterfly).	..	..	..	..	June 8	..	June 22	..
8 <i>Satyrus megera</i> (Wall Butterfly).	May 14	..	..	..	..	..	May 5	..
9 <i>Gonepteryx rhamni</i> (Brimstone).	May 22	Mar. 19	Mar. 19	Feb. 18	..	March 4	May 25	..
10 <i>Vanessa io</i> (Peacock Butterfly).	Mar. 20	Mar. 19	Mar. 22	Mar. 20	May 7	March 20	Mar. 19	..
11 <i>Vanessa atalanta</i> (Red Admiral).	May 13	..	Mar. 20	..	May 25	..	Mar. 21	..
12 <i>Vanessa cardui</i> (Painted Lady).	May 14	June 4	..	..	May 2	..	May 14	..
13 <i>Callimorpha jacobaea</i> (Cinnabar Moth).	May 22	May 21	..	..	July 4	..	June 5	..
14 <i>Abraxas grossulariata</i> (Currant Moth).	..	..	..	..	July 8	..	..	..



Return of Rainfall, &c., in Dorset, in 1920.

By the Rev. H. H. TILNEY BASSETT, R.D.



THE year 1920 was marked by no exceptional or heavy rainfalls, but by constant rain and unusual dull weather, and this was particularly a feature of the summer months, one station recording the total rainfall for July at 7'67in. The warmest day of the year was May 24th, maximum temperature 79'0°; the summer was generally cold. February was remarkable for being the driest month of the year and for producing the exceptionally high shade temperature of 60'0°, February 18th, and on the same day 61'0° in London and Bath, and in Leamington (Warwickshire), 63'0°. The only period of frost occurred between December 10th and 16th, when a good deal of snow fell in parts of Dorset, but the falls were local.

There were no very long spells of rainless weather, the longest being from August 18th to September 2nd, and November 2nd to 12th; the average rainfall for the year calculated from 15 stations, marked with an asterisk in the tables, was 34'831in., the average for the 65 years 1853 to 1920, 34'763in.

The heaviest fall in the 24 hours throughout the County occurred on January 10th, the greatest fall being registered on that day at 11 stations. Four observers record the greatest fall on January 28th, two on August 4th, two on October 1st, two on December 1st and two on April 14th. The heaviest fall in the 24 hours was registered at Bryanston, 1'64in., October 1st.

Days with fall of one inch or more in 24 hours:—Only one station records two such days, and 15 stations record one such day.

The maxima of wet days were recorded at Sherborne Castle, 211; Lyme Regis, 209; Iwerne Minster, 208; Turnworth, 204; Maiden Newton, 203; Beaminster, 199; the minimum, Wimborne, 131. There was a remarkable absence of thunder-storms during the year, a feature of several years past.

OBSERVERS' NOTES.

BEAMINSTER.—The average yearly rainfall here for 23 years is 38'56in., and the average number of rainy days for the same period, 180. The rainfall of 1920 was therefore as nearly as possible $1\frac{3}{4}$ inches above the average, and the rainy days 19 above. The wettest month was July, with a fall of 6'30in.; and at the end of that month the rainfall of the year to that date was $7\frac{1}{4}$ inches above the average, which will show the exceptionally dry weather of the autumn months.

FIENNES TROTMAN.

CHICKERELL, MONTEVIDEO.—June 14th, slight thunderstorm and some thunder. July 3rd, a little thunder a long way off. December 13th, the first snow. N.M.R.

DORCHESTER, WOLLASTON HOUSE.—No severe thunderstorm occurred during the year. Thunder was heard on 15th June, and on July 3rd and 4th.

No high temperature was recorded here; even during July and August. The maximum exceeded 70° only three times, viz.:—13th, 14th and 15th August, when 75° was reached once and 71° on the other two days.

The snowfall on 12th and 13th December measured six inches in depth. J.E.A.

MAIDEN NEWTON, WYNFORD HOUSE.—December 12th, the measurement of 0'20 inches was result of a fall of nearly three inches of snow, and it was noticed that morning, on my way up to London, that beyond Evershot Tunnel at Melbury Bubb far less snow had fallen, at Yetminster hardly any, and at Yeovil none at all; at Reading the ground was white as also from there to London. W.

SHAFTESBURY.—Rainfall for 1920, 31'76in. Average for years 1881—1920 (40 years), 32'57in., with probable error of 0'51in. Average monthly rainfall for years 1881—1920, Jan., 2'66in.; Feb., 2'29in.; March, 2'38in.; April, 2'13in.; May, 2'06in.; June, 2'28in.; July, 2'75in.; Aug., 3'06in.; Sept., 2'66in.; Oct., 3'80in.; Nov., 3'13in.; Dec., 3'57in., Total 32'57in.

Greatest fall on one day in 1920	1'19 inches,	July 3rd.
Greatest fall in one month in 1920	6'81	„ July
Least fall in one month in 1920	0'79	„ February.
Greatest yearly rainfall during years		
	1881—1920, 44'82	„ in 1882.
Least yearly rainfall during years		
	1881—1920, 22'78	„ in 1908.

STURMINSTER MARSHALL.—Thursday, April 29th, the '18in. measured fell between 4-40 and 5-40 p.m. in a heavy storm of hail followed by moderate rain. Tuesday, June 5th, sharp frost. Saturday, July 3rd, very heavy rain suddenly came on at noon for about $\frac{1}{2}$ -hour, '40in.; 5 p.m., '32in.; but heard no thunder till about 3. August 20-1, Ice on pool of rain on rick-cloth covering a wheat rick at Badbury Farm. December 12th, first smattering of snow. J.C.

WINTERBORNE WHITCHURCH.—*January* was extremely mild with the exception of the night of the 6th, when the temperature fell to 16'0° Rain fell on 22 days; the heaviest fall in 24 hours occurred on 28th, 0'77in. The warmest day was the 12th when the temperature rose to 55'0°, on the same day reading 58'0° in Bath and 57'0° in London,

February. Exceptionally mild and dry month for the season. Rain was measured on eight days, the heaviest fall in 24 hours, 0·16in. on the 20th. The highest temperature was registered on the 18th, when the thermometer rose to 60·0° in the shade; on the same day it reached 61·0° in London and as high as 63·0° in Leamington. This was the warmest day I have ever registered in February, the actual highest that as yet has been observed in February, is 68·0°, recorded in London, February 10th, 1898. The lowest temperature registered was 28·0°, the night of the 20th; the coldest day was the 21st, 40·0° maximum; warmest night the 14th, 45·0°. Total rainfall, 0·60in.

March. Mild weather prevailed throughout the month; there were 15 days on which rain fell; the heaviest fall in 24 hours occurred on the 13th, 0·53in. The warmest day was the 22nd, when the temperature rose to 66·0°; the lowest the night of the 3rd, 21·0°. The coldest day was the 8th, when the thermometer did not rise above 41·0°; the warmest night was the 27th, 48·0°. Snow fell lightly on the 9th and 14th. Total rainfall, 3·03in.

April. A very cold wet month. Rain fell on 21 days; the heaviest fall in 24 hours occurred on the 14th, 0·90in.; there was a very heavy hurricane from 7 p.m. the 14th to midnight 15th. The highest temperature occurred on the 23rd, 64·0°; the lowest on the night of 29th, 30·0°. The coldest day was the 2nd, 47·0°. The warmest night, 9th, 49·0°. Heavy hail and snow fell together from 4-15 to 5, quite covering the ground, on the 29th. Total rainfall, 4·52in.

May. Rain fell on 13 days; the heaviest fall in the 24 hours occurred on the 1st, 0·39in. There was faint lightning during the night of the 28th. The hottest day was the 24th, 79·0° in the shade (which indeed proved to be the hottest day of the summer. The coldest was registered on the night of the 19th, 34·0°. The warmest night was the 28th, when the temperature failed to fall below 56·0°. The coldest day was the 8th, with a maximum of 53·0°. Total rainfall, 1·75in.

June. A cold unsettled month. Rain fell on 14 days; the heaviest fall in 24 hours occurred on the 10th, 0'50in. The prevalence of dull cloudy weather for days together was a marked feature of the month. The highest temperature was registered on 24th, 7'20°; the lowest, the night of the 4th, 34'0°. The coldest day was the 12th with a maximum of 58'0°; the warmest night was that of the 28th, 58'0°. Total rainfall, 2'79in. On the 15th there was thunder to the S.W. 2-15 to 3 p.m., and again from 6 p.m. to 10 p.m. to the S.E. and N.

July. A cold wet month. The temperature did not exceed 70° in the shade on any one day. Rain fell on 22 days; the heaviest fall in 24 hours was 0'70in., on the 25th. The highest shade temperature was 70° which was registered on the 15th, 23rd and 30th; lowest observed, the night of the 25th, 40°. Thunder was heard to the S.E. from 12-30 to 2 p.m., to the N. and N.W. from 2-30 to 4 p.m. on the 3rd; on the 4th, distant thunder was heard to the N., 2-30 to 6 p.m. The coldest day was the 1st, when the temperature did not rise above 60'0°; warmest night, 56'0°, night of 24th. Total rainfall, 5'53in.

August. The first seven days of the month were very stormy, but from that period onward conditions improved greatly; no rain fell during the rest of the month except on the 18th. The heaviest fall in 24 hours was registered on the 4th, 0'70in. Highest temperature observed, 73'0°, on the 13th; lowest, night of the 31st, 37'0°. Total rainfall, 1'97in.

September. A fine month. Rain fell on seven days. Highest temperature, 74'0°, on the 12th; lowest, night of the 10th, 37°. Heaviest fall of rain in 24 hours occurred on the 17th, 0'27in. During the night of the 16th there was a heavy squall with two peals of thunder; and on the 19th a thunderstorm of slight intensity passed from N.W. to S.E. between 3 and 4 p.m. Total rainfall, 1'09in.

October. Up to the 6th of the month stormy and wild weather prevailed; very heavy rain, accompanied with several peals of thunder, fell on the morning of the 1st. Rain was

measured on 11 days; heaviest fall in 24 hours occurred on the 1st, 1'06in. Highest temperature was registered on the 7th, 68'0°; lowest, the night of the 31st, 31'0°. Total rainfall, 3'64in.

November. The special feature of the month perhaps was the high daily temperature for the time of year. Rain fell on nine days; the greatest fall in the 24 hours occurred on the 29th, 0'55in. Highest temperature was registered on the 8th, 60'0°; lowest, the night of the 16th, 28'0°. Total rainfall, 2'18in.

December. The month of December was generally mild, the last ten days exceptionally so, the thermometer rising to 50° and above on each day, and on the 26th reaching the exceptional height of 56'0° in the shade. But there was a sharp touch of real wintry weather from the 11th to 17th. From the evening of the 11th till the morning of the 14th the temperature did not rise above the freezing point, heavy snow showers being frequent during the period, especially one between 4 and 5 p.m. on the 13th. The highest temperature was registered on the 26th, 56'0°; the lowest, the night of the 15th, 20'0°. Total rainfall, 3'34in.



TABLE I.—DEPTH OF RAIN IN INCHES, 1920.

RAINFALL IN DORSET.

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Station.	Observer.	Jan.	Feb.	Mar.	Apr.	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total for Year.
*Abbotsbury, New Barn	J. C. P. White, Esq.	4.08	.41	2.93	3.50	1.57	2.25	4.30	1.44	1.54	2.38	1.70	3.48	30.18
*Beaminster, Hamilton Lodge	Fiennes Trotman, Esq.	5.91	1.02	3.25	4.78	2.38	2.30	6.30	2.72	1.87	2.86	2.55	4.72	40.32
*Bloxworth House	F. G. A. Lane, Esq.	5.12	.63	2.87	3.67	1.61	2.68	4.54	1.48	1.48	3.27	2.14	3.92	33.41
*Bloxworth House, Bourne Valley, Gas Works	...	3.92	.54	2.70	3.22	1.34	2.91	5.19	1.30	1.53	2.90	1.45	3.33	30.03
*Bradford Peverell	Mrs. Middleton	5.58	.76	3.53	4.61	1.76	2.82	6.34	1.78	2.23	3.37	2.92	3.80	39.40
*Bryanston Gardens, Blandford	J. Jaques, Esq.	6.16	.92	3.41	5.00	1.98	2.66	6.41	1.58	1.23	3.37	2.13	4.77	41.03
*Blandford	R. G. Richards, Esq.	6.01	.72	2.82	4.47	1.52	2.36	5.46	1.33	.98	3.57	1.76	4.64	36.64
*Blackdown House, Crewkerne	C. E. M. Pinney, Esq.	5.98	.91	3.98	5.36	2.07	2.40	6.33	2.76	2.26	3.11	2.44	4.76	42.26
*Chickerell, Montevideo	Mrs. N. M. Richardson	4.36	.44	3.92	3.82	1.63	2.20	3.69	1.41	2.22	2.59	1.02	3.31	29.51
*Corfe Castle, Bucknowle House	C. Waterson, Esq.	4.76	.56	2.57	2.97	1.50	2.62	5.23	1.44	1.45	1.75	1.97	3.63	29.85
*Dorchester, Wollaston House	Capt. J. E. Acland	5.68	.55	3.53	4.82	1.82	2.66	6.02	1.68	1.98	3.02	2.40	5.06	39.22
*Dorchester, Kingscote	E. Archdall Ffooks, Esq.	5.44	.67	3.57	4.98	1.83	2.81	6.00	1.80	2.05	3.09	2.14	4.92	39.30
*Gussage St. Michael, Manor	Miss F. Good	4.61	.75	2.80	4.26	1.41	2.27	6.89	1.45	1.18	2.47	1.73	3.28	32.60
*Holme, East	G. D. Bond, Esq.	4.98	.45	2.88	3.94	1.81	2.66	5.14	1.53	1.63	2.94	2.05	4.58	34.59
*Horton Vicarage	Rev. R. de Bary	4.21	.66	2.71	3.88	1.39	2.80	5.50	1.03	1.31	3.55	1.24	2.89	31.85
*Iwerne Minster, House Garden	Rev. R. A. Bond	4.60	.77	3.41	3.36	1.87	2.85	5.55	1.72	1.50	1.84	1.45	4.06	32.34
*Kinson	Jas. Ismay, Esq.	4.53	.70	2.75	4.98	1.38	2.39	5.19	1.97	1.52	3.19	1.64	3.11	33.28
*Lyme Regis, Rotherfield	W. Chas. Keevill, Esq.	5.20	.57	2.26	3.52	1.37	2.62	5.65	1.43	1.37	2.80	1.58	3.93	32.52
*Maiden Newton, Wynford House	Rev. E. J. Sing	5.09	.72	3.73	4.60	1.85	2.65	5.69	1.48	1.94	2.31	1.45	4.53	36.04
*Melbury House, Evershot	Lt.-Col. Lord Wynford	6.11	.82	4.14	5.31	2.17	3.48	7.67	2.15	2.56	2.64	3.04	5.30	45.39
*Portland, H.M. Naval Depot	R. Rintoul, Esq.	5.63	.90	3.23	5.41	1.71	1.95	5.90	1.96	1.60	2.94	2.55	4.70	38.48
*Oakers Wood, Dorchester	Superintendent Civ. Eng.	5.80	.65	2.75	2.95	1.65	2.39	3.94	1.67	1.58	1.92	1.71	4.41	31.42
*Shaftesbury	Miss Featherstonhaugh	5.34	.56	3.13	3.39	1.26	2.02	5.69	1.74	1.92	2.92	1.71	3.69	33.50
*Sherborne Castle	A. Macdonell, Esq.	4.02	.79	2.19	4.02	1.25	2.28	6.81	1.96	1.60	2.78	1.76	2.30	31.76
*Sturminster Marshall	T. Turton, Esq.	4.71	.88	2.57	4.94	1.59	2.76	4.75	2.49	1.36	3.36	1.20	2.91	32.50
*Sturminster Marshall	J. Wyndham Hull, Esq.	6.24	.72	3.61	5.00	1.86	2.72	6.76	1.71	1.95	3.39	2.35	5.20	41.01
*Tolpuddle	Rev. Jas. Cross	4.97	.34	2.38	3.40	1.05	2.26	5.23	1.49	1.63	2.77	1.87	3.68	30.37
*Wareham	Rev. H. Long	4.67	.93	3.00	3.99	1.53	2.12	5.09	1.49	1.64	3.11	2.06	3.90	33.10
*Wareham, Trigon	Col. Parry Okeden	6.10	.99	3.66	5.60	1.69	3.26	5.93	1.63	1.78	3.66	2.24	4.80	41.34
*Wimborne, Codford House	S. H. Bennett, Esq.	4.61	.51	2.61	3.71	1.57	2.64	5.93	1.53	1.95	2.82	1.83	4.10	39.99
*Wimborne, Codford House	Mrs. Leonard Sturdy	4.40	.42	2.59	3.41	1.33	2.43	4.97	1.48	1.27	2.93	1.73	3.92	30.96
*Winterborne Whitechurch	G. H. Batterbury, M.D.	4.22	.51	2.54	3.69	1.35	2.32	5.75	1.35	1.30	2.57	1.73	3.93	31.46
	Rev. H. H. Tilney Bassett	5.14	.60	3.06	4.52	1.75	2.79	5.52	1.97	1.09	3.64	2.18	3.96	36.22

* The averages have been calculated from Stations marked with an Asterisk.

TABLE II.—RAINFALL IN 1920.

Station.	Greatest fall in 24 hours.		Days with in. or more.	Number of Days on which 0·1in. or more was recorded.												
	Depth.	Date.		Jan.	Feb.	Mar.	April	May.	June.	July.	Aug.	Sept.	Oct.	Nov.	Dec.	Total
*Abbotsbury, New Barn	0·94	28 Jan.	0	26	18	21	21	12	11	23	7	12	11	12	20	194
Beamister, Hamilton Lodge	1·10	4 Aug.	1	25	15	20	20	16	13	24	7	12	12	10	21	199
Bloxworth House	0·90	10 Jan.	0	26	11	18	22	12	11	22	6	9	19	9	17	173
Bourne Valley, Branksome	1·00	10 Jan. { 15 Oct. }	2	18	8	14	19	8	9	18	5	10	10	8	13	140
Bradford Peverell	1·03	28 Jan.	1	25	11	17	23	10	9	21	6	10	11	10	13	166
Bryanston	1·64	1 Oct.	1	24	12	20	22	11	10	26	5	5	13	10	17	181
Blandford	1·00	31 Dec.	1	19	8	15	18	8	8	21	4	7	10	9	14	141
Blackdown House	1·22	4 Aug.	1	22	15	17	22	12	14	26	5	10	12	10	15	180
Chickerell, Montevideo	0·84	1 Dec.	0	24	15	19	25	14	13	20	6	8	10	10	18	188
Corfe Castle, Bucknowle House	0·91	10 Jan.	0	24	13	18	21	10	12	21	6	8	10	10	16	198
Dorchester, Wollaston House	1·00	28 Jan.	1	25	13	21	24	15	16	24	7	11	12	11	19	198
Dorchester, Kingscote	1·02	28 Jan.	1	26	13	19	23	10	11	21	7	11	12	10	16	179
Gussage, Manor...	0·84	19 July	0	24	15	16	25	14	13	26	6	9	9	9	16	183
Holme, East	0·83	10 Jan.	0	24	11	18	22	10	12	21	7	9	10	10	17	171
Horton	0·86	8 July	0	17	11	14	21	8	9	22	4	8	11	6	11	142
Kingston	1·12	20 June	1	26	16	20	24	11	12	18	7	10	11	11	21	187
Iwerne Minster	0·89	11 April	0	26	16	22	24	14	15	23	5	11	12	11	19	195
Kinson	0·85	10 Jan.	0	27	17	22	26	16	14	23	8	12	12	11	20	208
Lynne Regis	0·95	1 Dec.	0	23	17	22	27	15	13	26	9	12	14	11	20	209
Malden Newton	1·14	14 April	1	25	16	23	25	15	13	23	9	11	11	11	21	203
Melbury	1·05	10 Jan.	0	24	8	17	24	12	13	21	5	9	11	8	15	167
Oakers Wood, Affpuddle	0·88	10 Jan.	0	24	10	17	20	11	12	19	5	11	9	9	13	160
Portland	1·05	1 Dec.	1	24	15	17	21	12	13	24	6	9	11	9	16	177
Shaftesbury	1·19	3 July	1	25	12	19	23	11	10	27	6	10	9	8	19	179
Sherborne Castle	0·96	2 Aug.	0	25	14	22	26	15	12	25	7	12	17	16	23	211
Stinsford	1·03	10 Jan.	0	26	14	21	23	12	12	20	7	12	11	10	17	185
Sturminster Marshall...	0·91	10 Jan.	0	22	10	17	21	10	11	21	6	11	11	11	16	168
Tolpuddle	0·91	10 Jan.	0	26	14	21	23	12	13	21	6	11	11	11	19	188
Turnworth	1·06	3 Oct.	1	27	15	22	25	14	15	23	7	12	14	14	16	204
Wareham	0·76	10 Jan.	0	23	12	18	22	9	11	19	6	9	10	11	15	165
Wimborne	0·82	10 Jan.	0	26	17	23	24	14	15	25	6	14	15	12	20	131
Winterborne Whitchurch	1·06	1 Oct.	1	22	8	15	21	13	13	22	6	7	11	9	17	164

* The averages have been calculated from Stations marked with an Asterisk.

Sturminster Marshall (Bailie House) Tube Well.

The Figures show distance from top of tube to top of water.

3in. tube for 50ft. and about 70ft. further is $1\frac{1}{2}$ in. bore untubed. 33ft. S.E. of drawing room bow window, edge of lawn in walk. Top of tube is 1ft. above ground. This Tube Well has never been used as a well.—J.C.

—“Dorset Field Club Proceedings,” Vol. xxxiii. p. 149; Vol. xxxiv. p. 190.

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.
1913												
1	4 0 $\frac{1}{2}$	2 10 $\frac{1}{2}$	4 3 $\frac{1}{2}$	4 10	4 11	5 6 $\frac{1}{2}$	6 5 $\frac{3}{4}$	7 2 $\frac{1}{2}$	7 9 $\frac{3}{4}$	7 11 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 5 $\frac{1}{2}$
8	3 2 $\frac{3}{4}$	3 0 $\frac{1}{2}$	4 11	5 5 $\frac{1}{2}$	5 11	6 9 $\frac{3}{4}$	6 11 $\frac{1}{4}$	6 11 $\frac{3}{4}$	7 6 $\frac{1}{2}$	7 10 $\frac{3}{4}$	7 11 $\frac{1}{2}$	7 5
1920												
1	6 2 $\frac{3}{4}$	6 3	5 4	6 6	6 1	6 9 $\frac{3}{4}$	6 11 $\frac{1}{4}$	6 0	7 8	7 10 $\frac{3}{4}$	7 11 $\frac{1}{2}$	7 6 $\frac{1}{2}$
8	6 1	6 2 $\frac{1}{2}$	5 6	5 10 $\frac{1}{2}$	6 3	6 11	6 11	6 0	7 9	7 10 $\frac{3}{4}$	7 11	7 6 $\frac{1}{2}$
15	6 4 $\frac{1}{2}$	6 4 $\frac{1}{2}$	5 9 $\frac{1}{2}$	5 8	6 5	7 0	6 11	6 2	7 9	7 10 $\frac{3}{4}$	7 11	6 11
22	5 8 $\frac{1}{2}$	6 4 $\frac{1}{2}$	5 9 $\frac{1}{2}$	5 8	6 5	7 1 $\frac{1}{2}$	6 11	6 4	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 11	6 11
29	5 4	6 0	6 5	5 10 $\frac{1}{2}$	6 6 $\frac{1}{2}$	7 1 $\frac{1}{2}$	6 11	6 4	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 11	6 11
1921												
1	6 3	5 9 $\frac{3}{4}$	6 7 $\frac{1}{2}$	7 1	7 6 $\frac{1}{2}$	7 10 $\frac{1}{2}$	8 4	9 0				
8	5 9	6 0 $\frac{1}{4}$	6 9 $\frac{1}{4}$	7 2 $\frac{1}{2}$	7 7	7 11	8 5 $\frac{3}{4}$	9 2				
15	5 6	6 3	6 10 $\frac{3}{4}$	7 3 $\frac{1}{4}$	7 8	8 0 $\frac{3}{4}$	8 8					
22	5 8 $\frac{1}{4}$	6 5 $\frac{1}{4}$	6 11	7 4 $\frac{3}{4}$	7 8 $\frac{3}{4}$	8 2 $\frac{1}{2}$	8 11 $\frac{1}{2}$					
29	5 10 $\frac{3}{4}$	7 0 $\frac{1}{4}$	7 0 $\frac{1}{2}$	7 6	7 9 $\frac{3}{4}$	8 3 $\frac{3}{4}$	8 11 $\frac{3}{4}$					

TABLE II.—RAINFALL IN 1920.

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	Depth.	Date.		Jan.	Feb.	Mar.	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.	
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Bourne Valley, Branksome ..	1·00	10 Jan. { 15 Oct.	2	18	8	14	19	8	9	18	5	10	10	8	13	140
Bradford Perrell	1·03	28 Jan.	1	25	11	17	23	10	9	21	6	10	11	10	13	166
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Dorchester, Wollaston House	1·00	28 Jan.	1	25	13	21	24	15	16	24	7	11	12	11	19	198
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Kinson	0·85	10 Jan.	0	27	17	22	26	16	14	23	9	11	12	11	20	208
Lyme Regis	0·95	1 Dec.	0	23	17	22	27	15	13	26	9	12	14	11	20	209
Maiden Newton	1·14	14 April	1	25	16	25	25	13	13	23	9	11	11	11	21	203
Melbury	1·05	14 April	1	24	8	17	24	12	13	21	5	9	11	8	15	167
Oakers Wood, Airpuddle	0·88	10 Jan.	0	24	10	17	20	11	12	19	6	9	11	9	13	167
Portland	1·05	1 Dec.	1	24	15	17	21	12	13	24	6	9	11	9	16	177
Shaftesbury	1·19	3 July	1	25	12	19	23	11	10	27	7	10	9	8	19	179
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Sturminster Marshall (Bailie House) Tube Well.

The Figures show distance from top of tube to top of water.

3in. tube for 50ft. and about 70ft. further is 1 $\frac{1}{2}$ in. bore untubed. 33ft. S.E. of drawing room bow window, edge of lawn in walk. Top of tube is 1ft. above ground. This Tube Well has never been used as a well.—J.C.

—“Dorset Field Club Proceedings,” Vol. xxxiii. p. 149; Vol. xxxiv. p. 190.

	Jan.	Feb.	March	April	May	June	July	Aug.	Sept.	Oct.	Nov.	Dec.
	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.	ft. ins.
1913												
1	4 0 $\frac{1}{2}$	2 10 $\frac{1}{2}$	4 3 $\frac{1}{2}$	4 10	4 11	5 6 $\frac{1}{2}$	6 5 $\frac{3}{4}$	7 2 $\frac{1}{2}$	7 9 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 5 $\frac{1}{2}$	6 6
8	3 8	3 2 $\frac{1}{2}$	4 7	5 1 $\frac{1}{2}$	4 11	5 8 $\frac{3}{4}$	6 7 $\frac{1}{4}$	7 4	7 8	7 9 $\frac{1}{2}$	7 3 $\frac{1}{2}$	6 4 $\frac{1}{2}$
15	3 3 $\frac{3}{4}$	3 5 $\frac{1}{2}$	4 10 $\frac{1}{2}$	5 4 $\frac{1}{2}$	4 8 $\frac{3}{4}$	5 11 $\frac{1}{2}$	6 9 $\frac{1}{4}$	7 6	7 10	7 9	6 4 $\frac{1}{2}$	6 6 $\frac{1}{2}$
22	2 11 $\frac{1}{2}$	3 11	4 8 $\frac{1}{2}$	5 5	5 1 $\frac{3}{4}$	6 1 $\frac{1}{2}$	6 11 $\frac{1}{2}$	7 7 $\frac{1}{2}$	7 10 $\frac{1}{2}$	7 9 $\frac{1}{2}$	6 5	6 9 $\frac{1}{2}$
29	3 1 $\frac{1}{2}$	4 3	4 10	5 3 $\frac{1}{2}$	5 4	6 5	7 1 $\frac{1}{2}$	7 9 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 9 $\frac{1}{2}$	6 5	6 5 $\frac{1}{2}$
1914												
1	6 7 $\frac{1}{2}$	7 2	5 2 $\frac{3}{4}$	4 7	5 7 $\frac{1}{2}$	6 7	7 5	7 9	8 0 $\frac{1}{2}$	8 5	8 8 $\frac{1}{2}$	6 5
8	6 9	7 1 $\frac{1}{2}$	5 5 $\frac{1}{4}$	4 8	5 9 $\frac{1}{2}$	6 0 $\frac{1}{2}$	7 6	7 9	8 1 $\frac{1}{2}$	8 6 $\frac{1}{2}$	7 4 $\frac{3}{4}$	5 7 $\frac{1}{2}$
15	6 10 $\frac{1}{2}$	6 1 $\frac{1}{2}$	4 7 $\frac{1}{2}$	4 11 $\frac{1}{2}$	6 1	7 0 $\frac{1}{2}$	7 7 $\frac{1}{2}$	7 10	8 2 $\frac{1}{2}$	8 7 $\frac{1}{2}$	7 4 $\frac{1}{2}$	4 3 $\frac{1}{2}$
22	7 0 $\frac{1}{2}$	4 10	4 5 $\frac{1}{2}$	5 3 $\frac{1}{2}$	6 4	7 2 $\frac{1}{2}$	7 7 $\frac{1}{2}$	7 10 $\frac{1}{2}$	8 3 $\frac{1}{2}$	8 8	7 2 $\frac{1}{2}$	3 5 $\frac{1}{2}$
29	7 2 $\frac{1}{2}$	5 21	4 6 $\frac{1}{2}$	5 6 $\frac{1}{2}$	6 6	7 4 $\frac{1}{2}$	7 8 $\frac{1}{2}$	8 0	8 4 $\frac{1}{2}$	8 8 $\frac{1}{2}$	7 1 $\frac{1}{2}$	3 0
1915												
1	2 7	4 2	2 8 $\frac{1}{2}$	4 10	5 11	6 8	7 5 $\frac{1}{2}$	7 9 $\frac{1}{2}$	8 3	8 8 $\frac{1}{2}$	7 1 $\frac{1}{2}$	6 7 $\frac{1}{2}$
8	2 4	3 7 $\frac{1}{2}$	3 4 $\frac{1}{2}$	5 0 $\frac{1}{2}$	6 2	6 10	7 7	7 10 $\frac{1}{2}$	8 4 $\frac{1}{2}$	8 9 $\frac{1}{2}$	7 0	4 10 $\frac{1}{2}$
15	2 10	3 0 $\frac{1}{2}$	3 9 $\frac{1}{2}$	5 3 $\frac{1}{2}$	6 2 $\frac{3}{4}$	7 1	7 8 $\frac{1}{2}$	8 0	8 6 $\frac{1}{2}$	8 10 $\frac{1}{2}$	6 4	4 2 $\frac{1}{2}$
22	3 3 $\frac{3}{4}$	2 2 $\frac{3}{4}$	4 3	5 7 $\frac{1}{2}$	6 3 $\frac{3}{4}$	7 3	7 9	8 1	8 6	8 11 $\frac{1}{2}$	6 5 $\frac{1}{2}$	3 11
29	3 11 $\frac{1}{2}$	2 8 $\frac{1}{2}$	4 7 $\frac{1}{2}$	5 10 $\frac{1}{2}$	6 6 $\frac{1}{2}$	7 4 $\frac{1}{2}$	7 9 $\frac{1}{2}$	8 2 $\frac{1}{2}$	8 8 $\frac{1}{2}$	7 9 $\frac{1}{2}$	6 8	2 9 $\frac{1}{2}$
1916												
1	2 9 $\frac{1}{2}$	4 6 $\frac{1}{2}$	3 7 $\frac{1}{2}$	3 8 $\frac{1}{2}$	5 0	6 1	6 10 $\frac{1}{2}$	7 6 $\frac{1}{2}$	7 7 $\frac{1}{2}$	7 10	6 3	5 1 $\frac{1}{2}$
8	2 11	4 12	3 9 $\frac{1}{2}$	4 1 $\frac{1}{2}$	5 1 $\frac{1}{2}$	6 3 $\frac{1}{2}$	6 11 $\frac{1}{2}$	7 8 $\frac{1}{2}$	7 8 $\frac{1}{2}$	7 4 $\frac{1}{2}$	3 11 $\frac{1}{2}$	5 6
15	3 6 $\frac{1}{2}$	4 1	4 0	4 4 $\frac{1}{2}$	5 4 $\frac{1}{2}$	6 5 $\frac{1}{2}$	7 1 $\frac{1}{2}$	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 8 $\frac{1}{2}$	4 5	5 7
22	3 11 $\frac{1}{2}$	4 1	3 7 $\frac{1}{2}$	4 7 $\frac{1}{2}$	5 9	6 8 $\frac{1}{2}$	7 4	7 11 $\frac{1}{2}$	8 1 $\frac{1}{2}$	7 7 $\frac{1}{2}$	4 8 $\frac{1}{2}$	4 3
29	4 4 $\frac{1}{2}$	4 1 $\frac{1}{2}$	3 7	4 11 $\frac{1}{2}$	6 0 $\frac{1}{2}$	6 9 $\frac{1}{2}$	7 5 $\frac{1}{2}$	8 0 $\frac{1}{2}$	8 0 $\frac{1}{2}$	6 8 $\frac{1}{2}$	4 11 $\frac{1}{2}$	4 1 $\frac{1}{2}$
1918												
1	7 4	6 0	6 6	7 0 $\frac{1}{2}$	7 2 $\frac{1}{2}$	7 7 $\frac{1}{2}$	8 1 $\frac{1}{2}$	8 4	8 6 $\frac{1}{2}$	7 9 $\frac{1}{2}$	7 6 $\frac{1}{2}$	6 11 $\frac{1}{2}$
8	7 5 $\frac{1}{2}$	6 0 $\frac{1}{2}$	6 8 $\frac{1}{2}$	7 0 $\frac{1}{2}$	7 3 $\frac{1}{2}$	7 9	8 3 $\frac{1}{2}$	8 2 $\frac{1}{2}$	8 7 $\frac{1}{2}$	7 7 $\frac{1}{2}$	6 4 $\frac{1}{2}$	6 9 $\frac{1}{2}$
15	7 5 $\frac{1}{2}$	6 2	6 9 $\frac{1}{2}$	7 1 $\frac{1}{2}$	7 4 $\frac{1}{2}$	7 10 $\frac{1}{2}$	8 4	8 4	8 7 $\frac{1}{2}$	7 5 $\frac{1}{2}$	6 7 $\frac{1}{2}$	6 4
22	5 5 $\frac{1}{2}$	6 4 $\frac{1}{2}$	6 11 $\frac{1}{2}$	7 4	7 5 $\frac{1}{2}$	7 11 $\frac{1}{2}$	8 4 $\frac{1}{2}$	8 5 $\frac{1}{2}$	8 4 $\frac{1}{2}$	7 6 $\frac{1}{2}$	6 10	6 2 $\frac{1}{2}$
29	5 10 $\frac{1}{2}$	6 5 $\frac{1}{2}$	7 0 $\frac{1}{2}$	7 2 $\frac{1}{2}$	7 6 $\frac{1}{2}$	8 1	8 3 $\frac{1}{2}$	8 6	8 2 $\frac{1}{2}$	7 7 $\frac{1}{2}$	6 11 $\frac{1}{2}$	6 1
1919												
1	6 2	4 0 $\frac{1}{2}$	4 0	3 7 $\frac{1}{2}$	5 0	6 1 $\frac{1}{2}$	6 11	7 6	8 0 $\frac{1}{2}$	8 5	8 9 $\frac{1}{2}$	8 9
8	4 9	4 1 $\frac{1}{2}$	3 0	4 0 $\frac{1}{2}$	5 2	6 4	7 1	7 8	8 1	8 6 $\frac{1}{2}$	8 10 $\frac{1}{2}$	7 8 $\frac{1}{2}$
15	4 3 $\frac{3}{4}$	4 7 $\frac{1}{2}$	3 2	4 2	5 5 $\frac{1}{2}$	6 6 $\frac{1}{2}$	7 3	7 10	8 2 $\frac{1}{2}$	8 7 $\frac{1}{2}$	8 11	7 7 $\frac{1}{2}$
22	3 6	3 7 $\frac{1}{2}$	2 9 $\frac{1}{2}$	4 7 $\frac{1}{2}$	5 9	6 8 $\frac{3}{4}$	7 4	8 0	8 3 $\frac{3}{4}$	8 9	8 11	7 5
29	3 10 $\frac{1}{2}$	4 0	3 5 $\frac{1}{2}$	4 11	6 0	6 10 $\frac{1}{2}$	7 5 $\frac{1}{2}$	8 0 $\frac{1}{2}$	8 5	8 8 $\frac{3}{4}$	8 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$
1920												
1	6 2 $\frac{1}{2}$	6 0 $\frac{1}{2}$	4 11	6 5 $\frac{1}{2}$	5 11	6 7 $\frac{3}{4}$	7 1 $\frac{1}{2}$	6 11 $\frac{1}{2}$	7 4 $\frac{1}{2}$	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 10
8	6 1	6 3	5 4	6 6	6 1	6 9 $\frac{1}{2}$	6 11 $\frac{1}{2}$	6 11 $\frac{1}{2}$	7 6	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 3 $\frac{1}{2}$
15	6 4 $\frac{1}{2}$	6 2 $\frac{1}{2}$	5 6	5 10 $\frac{1}{2}$	6 3	6 11	6 8 $\frac{1}{2}$	6 0	7 8	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 5
22	5 8 $\frac{1}{2}$	6 4 $\frac{1}{2}$	5 9 $\frac{1}{2}$	5 8	6 5	7 0	6 11	6 2	7 9	7 10 $\frac{1}{2}$	7 11	7 6 $\frac{1}{2}$
29	5 4	6 0	6 5	5 10 $\frac{1}{2}$	6 6 $\frac{1}{2}$	7 1 $\frac{1}{2}$	6 11	6 4	7 10 $\frac{1}{2}$	7 11 $\frac{1}{2}$	7 11	6 11
1921												
1	6 3	5 9 $\frac{1}{2}$	6 7 $\frac{1}{2}$	7 1	7 6 $\frac{1}{2}$	7 10 $\frac{1}{2}$	8 4	9 0				
8	5 9	6 0 $\frac{1}{2}$	6 9 $\frac{1}{2}$	7 2 $\frac{1}{2}$	7 7	7 11	8 5 $\frac{1}{2}$	9 2				
15	5 6	6 3	6 10 $\frac{1}{2}$	7 3 $\frac{1}{2}$	7 8	8 0 $\frac{1}{2}$	8 8					
22	5 8 $\frac{1}{2}$	6 5 $\frac{1}{2}$	6 11	7 4 $\frac{1}{2}$	7 8 $\frac{1}{2}$	8 2 $\frac{1}{2}$	8 11 $\frac{1}{2}$					
29	5 10 $\frac{1}{2}$	7 0 $\frac{1}{2}$	7 0 $\frac{1}{2}$	7 6	7 9 $\frac{1}{2}$	8 3 $\frac{1}{2}$	8 11 $\frac{1}{2}$					



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